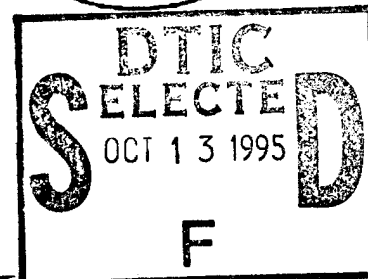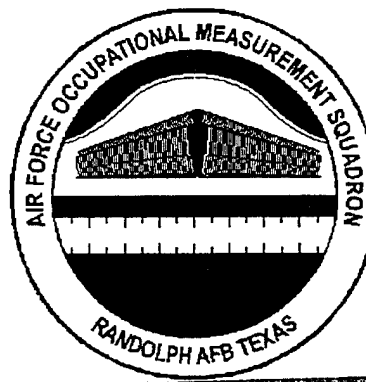**UNITED STATES
AIR FORCE**

OCCUPATIONAL
SURVEY REPORT

COMMUNICATION-COMPUTER SYSTEMS OPERATOR

AFSC 3C0X1

AFPT 90-491-008

JUNE 1995

**OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150-4449**

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PREFACE

This report presents the results of an Air Force Occupational Survey of the Communications-Computer Systems Operator (AFSC 3C0X1) career ladder. Authority to conduct occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

First Lieutenants Shannen M. Karpel and Callie J. Molloy, Inventory Development Specialists, developed the survey instrument. First Lieutenant Blair W. Conroy, Occupational Analyst, analyzed the data and wrote the final report. Mr. Wayne Fruge provided computer programming support, and Ms. Linda McDonald and Ms. Sharon Slayton provided administrative support. Major Randall C. Agee, Chief, Airman Analysis Section, Air Force Occupational Measurement Squadron (AFOMS), reviewed and approved this report for release.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the AFOMS, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph AFB, Texas 78150-4449 (DSN 487-6623).

RICHARD C. OURAND, JR., Lt Col, USAF
Commander
Air Force Occupational Measurement
  Squadron

JOSEPH S. TARTELL
Chief, Occupational Analysis Flight
Air Force Occupational Measurement
  Squadron

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SUMMARY OF RESULTS

1. *Survey Coverage*: Members of the Communications-Computer Systems Operator (AFSC 3C0X1) career ladder were surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 2,809 members worldwide. All commands were proportionately represented.

2. *Career Ladder Structure*: Structure analysis identified seven clusters of jobs and four independent jobs. All seven clusters and two of the jobs were directly involved in performing the operating and support of communications-computer systems. These jobs account for 85 percent of respondents, the rest perform tasks and duties that did not place them within the main jobs of the ladder.

3. *Career Ladder Progression*: Personnel at the 3- and 5-skill levels perform many tasks in common, and both groups spend the vast majority of their relative job time operating communications-computer systems across a wide variety of different jobs. At the 7-skill level, although members still perform a substantial amount of routine day-to-day communications-computer operations, a shift toward supervisory functions is evident.

4. *Training Analysis*: The Specialty Training Standard (STS) is generally supported, although the addition of several new functions, such as network administration, will have to be added to the job inventory and analyzed in the next cycle.

5. *Job Satisfaction Analysis*: Overall, respondents are satisfied with their jobs when compared to previous studies of this career ladder. Similar findings were noted when this career field was compared with responses from a representative sample of similar AFSCs. Respondents within specialty job groups, for the most part, are satisfied. Members in their first enlistment, however, showed noticeably lower job satisfaction ratings than other TAFMS groups within the survey sample and those in a comparative sample.

6. *Implications*: The Communications-Computer Systems Operator career ladder has shifted emphasis over the past 5 years. In the previous survey, Computer Operations and Communications Operations were the two major functions of the career ladder. As of January 1994, Computer Operations has dropped from 30 percent of the ladder to 14 percent, while Network Administration has grown to 10 percent from zero since it was not identified in the previous survey of the ladder. Communication with the Air Force Career Field Manager and Technical Training management indicates the mainframe responsibilities are rapidly declining along with the large Record Communications functions of the past. The Training environment in the next several years will also change rapidly to keep up with the these new computer and communication systems.

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OCCUPATIONAL SURVEY REPORT (OSR)
COMMUNICATIONS-COMPUTER SYSTEMS OPERATOR CAREER LADDER
AFSC 3C0X1

INTRODUCTION

This is a report of an occupational survey of the Communications-Computer Systems Operator (AFSC 3C0X1) career ladder conducted by the Occupational Analysis Flight of the Air Force Occupational Measurement Squadron. The survey was performed to provide information to support career field training documents. Data gathered through this OSR have already been used by the technical school to review their training courses and related training documents in light of equipment and utilization changes which have occurred since the last OSR in 1988.

Background

The AFMAN 36-2108 *Specialty Descriptions* for this career field state that 3- and 5-skill level members are responsible for preparing communications-computer systems for operation, operating consoles, performing system product control, and authorized operator maintenance of peripheral equipment. In addition, 3- and 5-skill level members troubleshoot problems occurring on various communications-computer machines.

In addition to the above, 7-skill level members are also responsible for planning and scheduling, supervising, evaluating and assisting, and controlling communications-computer systems activities.

Entry into the career ladder is from Basic Military Training School (BMTS) through a 70 day formal training course conducted at Keesler AFB MS. Resident ABR training includes principle-centered training relating to: Communcations-Computer Systems career ladder, security, internal coding systems, internal data flow, computer network principles, computer system components and configurations, and peripheral equipment and storage media.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) AFPT 90-491-008, dated June 1993. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, and tasks from previous applicable OSRs. The preliminary task list was refined and validated through personal interviews with 41 subject-matter experts (SMEs) selected to cover a variety of major commands (MAJCOMs) at the following locations:

BASE	ORGANIZATION
Keesler AFB MS	333 TCHTS/TTCCO
Little Rock AFB AR	314 CS/SCYO
Falcon AFB CO	50 OG/CCC
Tinker AFB OK	552 ACS/ACE
Kelly AFB TX	6900 CG/SCOO
Randolph AFB TX	12 CS/SC
Gunter AFB AL	SSC/SSQT

Other people contacted included Air Force Military Personnel Center (AFMPC) classification personnel, MAJCOM functional and resource managers, and the Air Force Career Field Manager.

The resulting JI contained a comprehensive listing of 500 tasks grouped under 18 duty headings, with a background section requesting such information as grade, job title, time in present job, time in service, job satisfaction, data processing system used, and forms used in the performance of the incumbent's job.

Survey Administration

From August 1993 to January 1994, military personnel flights at operational bases worldwide administered the inventory to a stratified random sample of half of all eligible AFSC 3C0X1 personnel (active duty). Members eligible for the survey consisted of the total assigned 3-, 5-, and 7-skill level population, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Members of the Air National Guard and Air Force Reserve were also surveyed. Participants were selected from a computer-generated mailing list obtained from AFMPC.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in his or her current job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task, compared to other tasks performed. The ratings ranged from 1 (very small amount time spent) to 9 (very large amount time spent).

Data Processing Approach

Using the ratings provided by the respondents, relative time spent for each task was computed by summing all the ratings given by the respondent, dividing each rating by that sum, and multiplying the result by 100. Assuming that all of the incumbent's ratings account for 100 percent of that member's job time, this procedure provides basis for comparing job descriptions of respondents in terms of percent members performing tasks and average percentage of time spent on tasks.

Survey Sample

Personnel were selected to participate in this study so as to ensure an accurate representation across MAJCOMs and paygrades. Tables 1 and 2 reflect the percentage, by MAJCOM, of assigned and sampled individuals in AFSC 3C0X1. The 2,809 respondents in the final sample represent 38 percent of all eligible AFSC 3C0X1 personnel. These data are displayed showing the assigned and sampled populations, based on the current MAJCOM structure. Table 2 reflects the percentage distribution by paygrade groups. As shown by both tables, the survey sample accurately reflects the overall population of the career field.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 3C0X1 personnel (generally E-6 or E-7 technicians) also completed a second booklet for either training emphasis (TE) or task learning difficulty (TD). The TE and TD booklets were processed separately from the JIs. The information gained from these task factor data is used in various analyses and is a valuable part of the training decision process.

Training Emphasis (TE). Individuals completing TE booklets were asked to rate tasks on a 10-point scale (from no training required to extremely high amount of training required). TE is a rating of which tasks require structured training for first-enlistment personnel. Structured training is defined as training provided at resident technical schools, field training detachments (FTD), mobile training teams (MTT), formal on-the-job training (OJT), or any other organized training method. TE data were independently collected from 36 experienced 7-skill level personnel stationed worldwide. The interrater reliability for these raters was acceptable, indicating there

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TABLE 1

MAJCOM REPRESENTATION IN SAMPLE

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
ACC	21	20
PACAF	10	10
AFSPACECOM	10	9
USAFE	9	12
AFMC	9	7
AMC	8	10
AIA	7	5
AFELM	7	3
AETC	5	7
OTHER	14	17

Number of Assigned:	8,499
Number Surveyed:	3,742
Number in Sample:	2,809
Percent of Assigned in Sample:	33%
Percent of Survey in Sample:	75%

* Denotes less than 1 percent

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TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
E-1 to E-3	20	18
E-4	31	36
E-5	26	25
E-6	14	13
E-7	9	7
E-8	*	*
E-9	*	*

was strong agreement among raters as to which tasks required some form of structured training and which did not. In this survey, tasks have an average TE rating of 2.16 and a standard deviation of 1.71; tasks considered high in TE have ratings of 3.87 and above. TE rating data may also be used to rank order tasks indicating those which senior NCOs in the field consider the most important for first-enlistment personnel to be trained to perform.

Task Difficulty (TD). Each individual completing a TD booklet was asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time required by the average incumbent to learn to do the task. TD data were independently collected from 43 experienced 7-skill level personnel stationed worldwide. Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. The resulting data yield essentially a rank-ordering of tasks indicating the degree of difficulty for each task in the inventory.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirement. Such insight may suggest a need for lengthening or shortening portions of instruction in support of first-enlistment jobs.

CAREER LADDER STRUCTURE

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Programs (CODAP) assist by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the job. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a cluster. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, seven clusters of jobs and four independent jobs were identified within the career ladder. Figure 1 illustrates the jobs performed by AFSC 3C0X1 personnel.

A listing of these jobs and job clusters is provided below. The stage (STG) number shown beside each title references computer printed information, the letter "N" indicates the number of personnel in each group.

    I. CONSOLE OPERATIONS CLUSTER 14% (STG266, N=387)

        A. Basic Console Operator Job (STG497, N=184)
        B. Operations and Security Job (STG559, N=7)

   II. RECORD COMMUNICATIONS CLUSTER 31% (STG204, N=866)

        A. Message Processing Job (STG414, N=660)
        B. Security and Supervision Job (STG311, N=128)
        C. Mobile Communications Job (GP75, N=81)

  III. DATABASE/NETWORK ADMINISTRATION CLUSTER 10% (STG67, N=268)

        A. Database Manager Job (STG355, N=111)
        B. Network Administration Job (STG397, N=52)

AFSC 3C0X1
CAREER LADDER JOBS

Entry Level
Operator Cluster 2%

Console Operations
Cluster 14%

Record Communications
Cluster 31%

Not Grouped 14%

Switchboard
Operations Job 2%

ADPE
Cluster 3%

Test and Eval
Job >1%

Training
Job 1%

Supervision
Cluster 12%

Security
Cluster 9%

Tape Librarian
Job 2%

Database/Network
Administration Cluster 10%
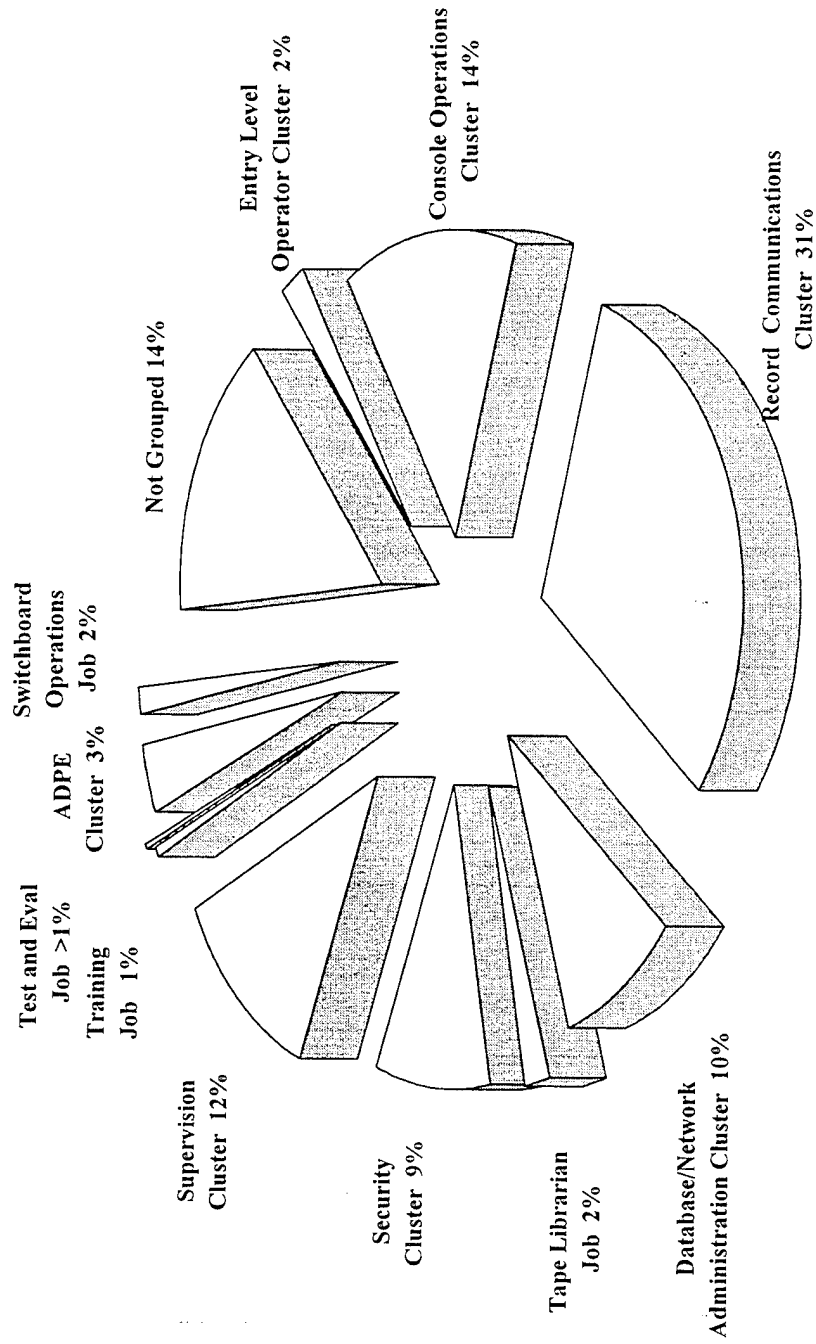
FIGURE 1

IV.   TAPE LIBRARIAN JOB 2% (STG388, N=53)

V.   ENTRY LEVEL OPERATOR CLUSTER 2% (STG129, N=57)

     A.   Equipment Monitor Job (STG363, N-6)
     B.   Output Monitor Job (STG466, N=15)
     C.   Power Monitor Job (STG418, N=9)

VI.   SECURITY CLUSTER 9% (STG161, N=254)

     A.   Communications Security Job (STG483, N=186)
     B.   Security NCOIC (STG301, N=41)

VII.   SUPERVISION CLUSTER 12% (STG55, N=330)

     A.   Shift Supervisor (STG475, N=164)
     B.   Resource Manager (STG360, N=9)

VIII.   TRAINING JOB 1% (STG182, N=19)

IX.   TEST AND EVALUATION JOB >1% (STG385, N=7)

X.   ADPE CLUSTER 3% (STG58, N=96)

     A.   Contract Manager (STG370, N=47)
     B.   ADPE Job (STG328, N=10)

XI.   SWITCHBOARD OPERATIONS JOB 2% (STG171, N=44)

XII.   NOT GROUPED 14% N=428

The respondents forming these groups account for 86 percent of the survey sample. The remaining 14 percent perform tasks which do not group with any of the other defined jobs. Some of the job titles given by respondents which were representative of these personnel include: Data Processor, ADPE Resource Manager, System Monitor, and Comm-Center Operator.

Group Descriptions

The following paragraphs contain brief descriptions of the four independent jobs and seven job clusters identified through the career ladder structure analysis. Appendix A lists representative tasks performed by identified independent job and job cluster groups. Table 3 displays time spent on duties, while Table 4 provides demographic information for each job discussed within this report.

TABLE 3

AVERAGE TIME SPENT ON DUTIES BY CAREER LADDER JOBS

	CONSOLE OPERATIONS CLUSTER N=387	RECORD COMM CLUSTER N=866	DBASE/NET ADMIN CLUSTER N=268	TAPE LIBRARIAN JOB N=53	ENTRY-LVL OPERATOR CLUSTER N=57	SECURITY CLUSTER N=254
A. ORGANIZING AND PLANNING	4	3	5	2	1	10
B. DIRECTING AND IMPLEMENTING	4	3	3	1	*	7
C. INSPECTING AND EVALUATING	3	2	3	*	*	7
D. TRAINING	5	3	3	2	1	6
E. PERFORMING GENERAL COMMUNICATIONS-COMPUTER SYSTEMS ACTIVITIES	19	16	19	20	25	3
F. PERFORMING COMMUNICATIONS-COMPUTER SYSTEMS OPERATOR ACTIVITIES	37	17	24	23	54	2
G. PERFORMING PRODUCTION CONTROL OR SYSTEMS MONITOR ACTIVITIES	2	1	9	1	3	0
H. PERFORMING GENERAL COMMUNICATIONS ACTIVITIES	1	2	*	0	*	0
I. PROCESSING MESSAGES	2	24	*	*	*	1
J. PERFORMING TELECOMMUNICATIONS TRAFFIC ANALYSIS ACTIVITIES	0	2	0	0	0	0
K. PERFORMING MAGNETIC MEDIA LIBRARY ACTIVITIES	8	3	2	38	5	0
L. PERFORMING COMMUNICATIONS-COMPUTER MOBILITY ACTIVITIES	0	2	0	0	0	1
M. OPERATING NON MOBILE TELEPHONE SWITCHBOARDS	0	1	0	0	0	0
N. PERFORMING SOFTWARE PLANNING AND DESIGN	0	0	6	0	0	0
O. PERFORMING SOFTWARE DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE	2	1	13	1	*	0
P. PERFORMING SOFTWARE TESTING, QUALITY ASSURANCE, AND CONFIGURATION MANAGEMENT ACTIVITIES	*	0	4	0	*	0
Q. MAINTAINING SECURITY	11	17	4	8	6	60
R. PERFORMING SUPPLY OR CONTRACTING ACTIVITIES	2	1	4	2	3	2

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

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TABLE 3 (CONTINUED)

AVERAGE TIME SPENT ON DUTIES BY CAREER LADDER JOBS

	SUPERVISION CLUSTER N=330	TRAINING CLUSTER N=19	TEST AND EVAL JOB N=7	ADPE CLUSTER N=96	SWITCH BOARD JOB N=44
A. ORGANIZING AND PLANNING	19	10	2	7	4
B. DIRECTING AND IMPLEMENTING	15	6	*	4	3
C. INSPECTING AND EVALUATING	16	5	1	4	3
D. TRAINING	9	57	*	3	6
E. PERFORMING GENERAL COMMUNICATIONS-COMPUTER SYSTEMS ACTIVITIES	12	4	6	10	6
F. PERFORMING COMMUNICATIONS-COMPUTER SYSTEMS OPERATOR ACTIVITIES	6	3	11	6	2
G. PERFORMING PRODUCTION CONTROL OR SYSTEMS MONITOR ACTIVITIES	1	0	3	*	0
H. PERFORMING GENERAL COMMUNICATIONS ACTIVITIES	0	0	0	0	*
I. PROCESSING MESSAGES	1	*	0	0	*
J. PERFORMING TELECOMMUNICATIONS TRAFFIC ANALYSIS ACTIVITIES	*	1	0	0	0
K. PERFORMING MAGNETIC MEDIA LIBRARY ACTIVITIES	*	0	0	0	0
L. PERFORMING COMMUNICATIONS-COMPUTER MOBILITY ACTIVITIES	*	*	0	0	*
M. OPERATING NON MOBILE TELEPHONE SWITCHBOARDS	0	*	0	*	68
N. PERFORMING SOFTWARE PLANNING AND DESIGN	3	*	6	1	*
O. PERFORMING SOFTWARE DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE	2	1	23	1	0
P. PERFORMING SOFTWARE TESTING, QUALITY ASSURANCE, AND CONFIGURATION MANAGEMENT ACTIVITIES	1	0	43	1	0
Q. MAINTAINING SECURITY	8	7	*	2	8
R. PERFORMING SUPPLY OR CONTRACTING ACTIVITIES	4	3	3	59	0

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

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TABLE 4

SELECTED BACKGROUND DATA FOR AFSC 3C0X1 CAREER LADDER JOBS

	CONSOLE OPERATIONS CLUSTER	RECORD COMM CLUSTER	DBASE/NET ADMIN CLUSTER	TAPE LIBRARIAN JOB	ENTRY-LVL OPERATOR CLUSTER	SECURITY CLUSTER
NUMBER IN GROUP	387	866	268	53	57	254
PERCENT OF SAMPLE	14%	31%	10%	2%	2%	9%
DAFSC DISTRIBUTION:						
3C031	15%	18%	9%	30%	37%	7%
3C051	66%	68%	62%	62%	56%	52%
3C071	18%	14%	29%	8%	7%	41%
PAYGRADE DISTRIBUTION:						
E-1 to E-3	21%	24%	9%	47%	54%	5%
E-4	40%	45%	39%	38%	35%	30%
E-5	28%	23%	35%	13%	11%	29%
E-6	11%	6%	14%	2%		19%
E-7	2%	2%	2%			16%
E-8						
AVERAGE TASKS PERFORMED	71	83	85	40	21	46
AVERAGE MONTHS TAFMS	87	75	95	16	43	127
PERCENT IN FIRST ENLISTMENT	40%	46%	25%	99%	74%	13%
PERCENT SUPERVISING	43%	38%	29%	15%	0%	39%

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TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR AFSC 3C0X1 CAREER LADDER JOBS

	SUPERVISION CLUSTER	TRAINING CLUSTER	TEST AND EVAL JOB	ADPE CLUSTER	SWITCHBOARD JOB
NUMBER IN GROUP	330	19	7	96	44
PERCENT OF SAMPLE	12%	1%	>1%	3%	2%
DAFSC DISTRIBUTION:					
3C031**	1%	5%	0%	7%	32%
3C051	18%	42%	86%	61%	55%
3C071	78%	53%	14%	31%	14%
PAYGRADE DISTRIBUTION					
E-1 to E-3	1%	5%	0%	8%	41%
E-4	6%	26%	14%	36%	34%
E-5	21%	37%	71%	30%	14%
E-6	38%	32%	14%	20%	11%
E-7	32%			5%	
E-8	1%				
AVERAGE TASKS PERFORMED	62	27	48	30	22
AVERAGE MONTHS TAFMS	171	120	129	110	62
PERCENT IN FIRST ENLISTMENT	4%	10%	0%	17%	50%
PERCENT SUPERVISING	86%	32%	14%	26%	18%

Another way to illustrate these jobs is to summarize tasks performed into groups of task modules. These modules were identified through CODAP co-performance clustering, which presents the average probability that members who perform one task will also perform a second task or group of related tasks. Each job description includes a listing of the top task modules for that job. This allows for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. The display shows the number of tasks included in a module, the average percent time spent on that module, and the average percent members performing the particular task module. Representative task modules are listed as part of the job description. The list of modules with respective tasks is presented in Appendix B.

I. <u>CONSOLE OPERATIONS CLUSTER (STG 266)</u>. The members holding the jobs in this cluster operate mainframe computer consoles. The career field is phasing out these mainframe systems and moving towards network systems. This change in equipment is expected to change the composition of the ladder greatly. However, at the time of this survey the Console Operations jobs are the second largest in the career ladder. Members perform all operator responsibilities such as loading and unloading magnetic media, monitoring system equipment and system printouts, and coordinating mainframe downtime with users. These jobs are distinguished from the rest of the ladder by the amount of time members spend performing comm-computer system operator activities (37 percent of their relative job time, see Table 3). Representative tasks for this cluster include:

CONSOLE OPERATIONS CLUSTER	
Number of members	387
Percent of total sample	14%
Average number of tasks performed	71
Average time in career field	6.4 yrs
Average TAFMS	7.3 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-4
Predominant MAJCOM	SPACE

- Mount or dismount magnetic media
- Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes
- Perform communications-computer systems startup or shutdown procedures
- Perform communications-computer systems equipment power-on or power-off procedures
- Respond to system requests
- Label magnetic media
- Monitor operational status of equipment
- Interpret indicating lights on peripheral equipment
- Respond to inquiries from customers, such as computer job or message status

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Respondents in these jobs predominantly hold the 5 skill level. More than a third are in their first enlistment. Their average Total Active Federal Military Service (TAFMS) is 7.3 years.

Representative task modules (TM) for this cluster include:

TM	Module Title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0001	Mainframe Console Operations	18	27.2	78
0002	Product Control and Distribution	6	5.6	56
0004	Data Flow Monitoring	4	3.4	51

The first job within this cluster is Basic Console Operator job (STG497, N=184). These members are responsible for operating mainframe consoles and fit the above description. They spend nearly half (46 percent) of their relative job time mounting magnetic media, responding to system requests, and interpreting indicating lights.

The second job is the Operations and Security job (STG559, N=7). Members in this area perform the same operator tasks as the rest of the cluster; however, they also perform additional security tasks such as changing lock combinations, marking classified material, and sanitizing sites following classified material processing.

II. RECORD COMMUNICATIONS CLUSTER (STG204).

The 866 members of this cluster represent 31 percent of the total survey sample. These jobs are performed by more respondents than any other job in the career ladder. Members perform many communications functions and hold the only jobs in the ladder that process messages (24 percent of their time). They also have security responsibilities, although not as extensive as the Security cluster. Members are distinguished by the amount of time they spend performing the following tasks:

RECORD COMMUNICATIONS CLUSTER	
Number of members	866
Percent of total sample	31%
Average number of tasks performed	83
Average time in career field	5.5 yrs
Average TAFMS	6.2 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-4
Predominant MAJCOM	ACC/USAFE

- Respond to service messages
- Maintain service message logs or files
- Follow up service messages
- Separate incoming messages for distribution
- Stamp messages with special handling, precedence, or classification
- Destroy or dispose of classified or sensitive unclassified materials

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- Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions
- Notify addressees or distribution centers of high precedence message receipt

This cluster can further be described by the following list of representative TMs.

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0005	Message Processing	17	21.4	77
0010	COMSEC Accounts	24	14.5	47
0001	Mainframe Console Operations	18	13.5	57
0002	Product Control and Distribution	6	6.2	60

Sixty-eight percent of the incumbents in this cluster possess the 5-skill level. The members are split between Air Combat Command and Air Force Space Command. Similar to the previous cluster, nearly one-half (see Table 4) of these members are in their first enlistment.

This Communications cluster contains three distinct jobs. The first job is Message Processing job (STG414, N=660). The main areas of responsibility are managing message processing, routing messages, monitoring service messages, and final processing of messages. This is the most junior job of the cluster.

The second job is the Security and Supervision job (STG311, N=128). These members are distinguished from the rest of the cluster by the time they spend in maintaining security for communications. They perform tasks such as destroy or dispose of classified materials, inventory classified or COMSEC material, and Performing physical security inspections. They also spend more than 25 percent of their relative job time supervising subordinates in the Record Communications. These members perform many of the same tasks as the Security cluster personnel, although the time they spend processing messages clearly distinguishes them from the Security cluster.

The third job is the Mobile Communications job (GP75, N=81). These members are responsible for several different areas of mobility. Their main responsibilities include setting up and maintaining mobile switchboards and maintaining mobile communications platforms. Most members work with Tactical Communications or Combat Communications units, although some work with various mobile communications systems such as the White House Communications Staff.

III. DATABASE/NETWORK ADMIN. CLUSTER
(STG67). The 268 members of this cluster represent 10 percent of the total sample. Members are in charge of production control. They function as the liaison between the personnel requesting computer products and the computer operators. These members have the most diverse job in the career field and perform the most number of tasks in the ladder. They perform many troubleshooting and monitoring tasks related to various computer systems. Distinguishing tasks for the Database/Network Administration cluster include:

DATABASE/NETWORK ADMIN. CLUSTER	
Number of members	268
Percent of total sample	10%
Average number of tasks performed	85
Average time in career field	7 yrs
Average TAFMS	7.9 yrs
Predominant DAFSCs	3C051
Predominant paygrades	E-4/E-5
Predominant MAJCOM	ACC

- Coordinate with subscribers or customers on operational or procedural matters
- Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes
- Assist users in resolving computer software malfunctions or problems
- Analyze console displays or system printouts
- Respond to inquiries from customers, such as computer job or message status
- Initialize processing, such as batch job, on-line, or off-line
- Resize database areas
- Isolate causes of machine stops or malfunctions
- Determine causes of abnormal program halts
- Analyze communications-computer systems processing capabilities
- Analyze database requirements

Representative TMs for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0001	Mainframe Console Operations	18	12.9	51
0008	Customer Service	7	7.0	58
0025	System Monitoring	7	5.4	45
0002	Product Control and Distribution	6	4.9	47
0024	System Scheduling	5	3.9	47

The average TAFMS for incumbents is 7.9 years. Ninety-one percent possess the 5- or 7-skill level. This cluster, like the previous two, is composed of a large number of first-enlistment personnel (see Table 4). The vast majority of these members (74 percent) hold the rank of E-4 or E-5.

Two distinct jobs were noted in this cluster. The first job is the Database Manager job (STG355, N=111). These members are in charge of Mainframe type database systems. They spend their time isolating problems on production runs, reviewing computer output, and monitoring data flow. Their predominant paygrade is E-4, and their average TAFMS is 7 years.

The second job is the Network Administration job (STG397, N=52). These members also reported such job titles as System Administrator and Monitor. This job is the broadest in the ladder, with members performing 50 more tasks than the average job in the ladder. Incumbents work with computer networks, troubleshoot comm-computer system deficiencies, and review capabilities and future system requirements. Members are more senior than those with the previous job, averaging 9 years in the service.

IV. TAPE LIBRARIAN JOB (STG388). These incumbents have a distinct role within the mainframe computer world. They maintain data tape libraries for mainframe systems. Their responsibilities include filing, inspecting, and degaussing magnetic media. Members perform the fewest tasks in the ladder and are clearly distinguished by the amount of time they spend performing library duties (see Table 3). Representative tasks are presented below:

TAPE LIBRARIAN JOB	
Number of members	53
Percent of total sample	2%
Average number of tasks performed	40
Average time in career field	3.7 yrs
Average TAFMS	4.3 yrs
Predominant DAFSCs	3C051
Predominant paygrade	E-1 TO E-3
Predominant MAJCOM	SPACECOM

- Certify magnetic media
- File magnetic media
- Clean magnetic media
- Place load-point or end-of-tape markers on magnetic tapes
- Degauss magnetic media
- File returned magnetic media
- Identify tape failures

Tape Librarian job members average over 4 years in the career field. The predominant paygrade is E-1 through E-3. Members are assigned primarily to AFSPACECOM, although most of the other MAJCOMs are represented.

Representative TMs for this cluster include:

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TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0007	Tape Library	17	36.8	72
0001	Mainframe Console Operations	18	17.0	38
0006	Mainframe Operator Tape Responsibilities	5	8.0	54
0002	Product Control and Distribution	6	6.1	39

V. ENTRY-LEVEL OPERATOR CLUSTER (STG129). This cluster of jobs is most similar to the first cluster discussed in that members work with mainframe computer systems. They perform the same tasks as the first cluster; however, members perform three basic functions that are more narrow in focus than the Console Operations cluster. The three entry-level jobs are Equipment Monitor (STG 363, N=6), Output Monitor (STG466, N=15), and Power Monitor (STG418, N=9). As shown by the tasks in Appendix A, members perform basic magnetic tape tasks, monitoring of equipment tasks, and tracking of basic work-run requests. Members move from these three jobs to one of the main clusters of the ladder such as Record Communications or Console Operations. Representative tasks for this cluster include:

ENTRY LEVEL OPERATOR CLUSTER	
Number of members	57
Percent of total sample	2%
Average number of tasks performed	21
Average time in career field	3.4 yrs
Average TAFMS	3.6 yrs
Predominant DAFSCs	3C051
Predominant paygrades	E-1 TO E-3
Predominant MAJCOM	ACC/AMC

- Mount or dismount magnetic media
- Monitor operational status of equipment
- Label magnetic media
- Perform communications-computer systems startup or shutdown procedures
- Respond to system requests
- Perform communications-computer systems equipment power-on or power-off procedures

Representative TMs for this cluster include:

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TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0001	Mainframe Console Operations	18	49.9	48
0002	Product Control and Distribution	6	7.8	26
0004	Data Flow Monitoring	4	5.0	21

The majority of incumbents have 3 to 4 years in the field. The paygrade distribution reflects a junior group of Air Force members, E-1 to E-3. These members perform the fewest tasks in the ladder averaging only 21 tasks performed.

VI. SECURITY CLUSTER (STG161). The main function of the cluster is maintaining communication and computer security. Members handle classified materials, as well as monitor security systems, such as safes and control access to restricted locations. Members are distinguished from the rest of the ladder by the amount of time they spend on the following security-oriented tasks:

SECURITY CLUSTER	
Number of members	254
Percent of total sample	9%
Average number of tasks performed	46
Average time in career field	9.2 yrs
Average TAFMS	10.6 yrs
Predominant DAFSC	3C051/71
Predominant paygrades	E-4/E-5
Predominant MAJCOM	ACC

- Destroy or dispose of classified or sensitive unclassified materials
- Store or safeguard classified materials
- Witness destruction of classified materials
- Inventory classified or communications security (COMSEC) materials
- Verify access to restricted or controlled areas or classified materials
- Change lock combinations for safes, vaults, or cipher locks
- Prepare destruction reports for classified materials
- Maintain COMSEC account records
- Page count classified materials
- Report security violations

Incumbents average more than 10 years in the service. The two dominant paygrades are E-4 and E-5. More members of this cluster hold the 7-skill level (41 percent) than any other non-supervisory job in the ladder. However, as shown in Table 4, some junior members work in this cluster too.

The first job in the cluster is the Communications Security (COMSEC) job (STG483, N=186). Members focus on COMSEC and perform courier functions, determine protection requirements for classified materials, and issue COMSEC materials.

The second job is the Security NCOIC job (STG301, N=41). These members focus on security management. They implement and evaluate security programs, plan and brief security issues to upper management, and perform various security inspections.

Representative TMs for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0010	COMSEC Accounts	24	46.5	71
0012	Safety/Security	8	10.6	49
0011	Security Supervision Functions	9	7.4	42
0013	First Line Supervision	22	11.1	30

VII. SUPERVISION CLUSTER (STG55). This is a cluster of incumbents performing similar supervisory tasks. The supervision cluster is distinguished from the other jobs performed in the career ladder by the amount of time members spend counseling and evaluating subordinates and managing communications-computer programs. As shown in Table 3, members spend 68 percent of their relative job time in Duties A through D, which include organizing and planning to training. Representative tasks for this cluster include:

SUPERVISION CLUSTER	
Number of members	330
Percent of total sample	12%
Average number of tasks performed	62
Average time in career field	12.1 yrs
Average TAFMS	14.3 yrs
Predominant DAFSC	3C071
Predominant paygrades	E-6
Predominant MAJCOM	ACC

- Counsel personnel on personal or military-related matters
- Write EPRs
- Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)
- Interpret policies, directives, or procedures for subordinates
- Determine or establish work priorities
- Write recommendations for awards or decorations
- Evaluate personnel for compliance with performance standards
- Determine requirements for space, personnel, equipment or supplies
- Plan or schedule work assignments

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This is the most senior cluster of jobs in the ladder as members average more than 12 years in the service. The predominant paygrade is E-6. Most members belong to ACC; however, many other MAJCOMs are also represented.

The one distinct job within this cluster is the First-Line Supervisor job (STG475, N=164). Members spend the majority of their relative job time interacting with subordinates, counseling, and performing performance appraisals.

Representative TMs for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0013	First Line Supervision	22	29.1	63
0014	Resource Management	4	4.6	59
0008	Customer Service	7	5.1	36
0015	Program Management	16	11.0	42

VIII. TRAINING JOB (STG182). The personnel working in the Training job spend 57 percent of their time in various training duties. They develop lesson plans evaluate training methods or techniques and conduct training conferences or briefings. This job is distinguished from the rest of the career ladder by the following training tasks personnel perform:

TRAINING JOB	
Number of members	19
Percent of total sample	1%
Average number of tasks performed	27
Average time in career field	8.9 yrs
Average TAFMS	10 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-5
Predominant MAJCOM	AETC

- Develop training aids
- Develop lesson plans
- Evaluate training methods or techniques
- Maintain training records, charts, or graphs
- Evaluate progress of trainees
- Conduct training conferences or briefings

Incumbents average more than 8 years in the field, having more experience than members with most jobs in the career ladder. The majority of these members hold the rank of E-5 and hold the 7-skill level.

Representative TMs for this job include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0013	First Line Supervision	22	32.6	35
0017	Training Development	5	15.8	68
0018	Instruction	5	14.0	52

IX. TEST AND EVALUATION JOB (STG385).

The Test and Evaluation job is a small job compared to the numbers of incumbents in the Console Operations cluster and the Base Communications cluster. However, these members perform a distinct job testing communication-computer systems and related software. Representative tasks for this job include:

- Determine impact of releases or changes to system databases
- Run subsystems tests on communications-computer systems
- Run total systems tests on communications-computer systems
- Test computer programs
- Track status of software discrepancies
- Participate with programmers in testing or debugging programs

TEST AND EVALUATION JOB	
Number of members	7
Percent of total sample	>1%
Average number of tasks performed	48
Average time in career field	10.3 yrs
Average TAFMS	10.7 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-5
Predominant MAJCOM	AFC4A

Representative TMs for this job include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0037	System Integrity checks	13	25.8	77
0028	Database Management	12	8.5	37
0026	Error Analysis	5	5.7	51
0027	Database Administration	6	4.7	26

These seven members are found only in AFC4A and are more senior members, averaging almost 11 years in the service. Table 4 shows a predominant rank of E-5 and 86 percent hold the 5-skill level.

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X. <u>ADPE CLUSTER (STG58)</u>. Incumbents holding these jobs report spending 59 percent of their time performing ADPE or contracting activities. Two distinct jobs are found within this cluster. The main work of the cluster is focused on vendor contracts and related activities. However, there are a few members that perform a focused job that only includes ADPE tasks such as inventory tracking and equipment issue recording. Representative tasks for this cluster include:

ADPE CLUSTER	
Number of members	96
Percent of total sample	3%
Average number of tasks performed	30
Average time in career field	7.8 yrs
Average TAFMS	9.2 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-4
Predominant MAJCOM	ACC

- Inventory tools, supplies, or equipment
- Dispose of excess or unserviceable tools, supplies, or equipment
- Maintain equipment custodian accounts
- Research status of purchase orders
- Monitor compliance with contracts
- Establish or maintain hand receipt files
- Administer delivery of open purchase orders
- Confirm contract terms, such as delivery date or quantity
- Distribute purchasing information to vendors or customers
- Inspect tools, supplies, or equipment

These airmen average more than 9 years in the service and 61 percent hold the 5-skill level. Although they perform few tasks on average (30 tasks), they are responsible for tracking much of the communications-computer equipment in the Air Force.

The first job in the cluster is the Contract Manager job (STG370, N=47). These members perform tasks outside of the normal communications tasks of the ladder. Instead, they spend more time than any other job maintaining contracts. They are responsible for distributing purchase orders, closing out purchase contracts, and monitoring compliance with contracts.

The second job is the ADPE job (STG328, N=10). These 10 members only perform Automated Data Processing Equipment tracking tasks such as taking inventories or disposing of unserviceable equipment. Members perform fewer tasks than any other job. They average 9 years in the service, and the predominant paygrade is E-4.

Representative TMs for this cluster include:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0023	ADPE/Contract Custodian	16	28.7	45
0022	ADPE Inventory	9	26.3	58
0014	Resource Management	4	2.6	24

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XI. SWITCHBOARD OPERATIONS JOB (STG171). Members holding the Switchboard Operations Job maintain non-mobile switchboards. They are responsible for operating the switchboard which includes placing calls, processing conference calls, monitoring emergency calls, and testing switchboard circuits. While these functions are outside the mainstream of the Communications-Computer Operator career ladder, these members have been selected to perform this job. As shown in Table 4 they are the only incumbents in the ladder performing these functions and they spend 68 percent of their relative job time operating or maintaining these switchboards. Representative tasks for this job include:

SWITCHBOARD OPERATIONS JOB	
Number of members	44
Percent of total sample	2%
Average number of tasks performed	22
Average time in career field	4.9 yrs
Average TAFMS	5.2 yrs
Predominant DAFSC	3C051
Predominant paygrades	E-4
Predominant MAJCOM	7thCG/ACC

- Place calls between subscribers, other than special handling calls
- Process telephone conference calls
- Connect calls according to their precedence
- Coordinate switchboard circuit or equipment problems with maintenance, technical control, or support agencies
- Place special handling calls
- Monitor high precedence or emergency calls
- Test switchboard circuits

Representative TMs are:

TM	Module title	No. of Tsks	Percent Time Spent (Sum)	Avg. Percent Members Perform
0038	Switchboard Operations	7	42.1	81
0013	First Line Supervision	22	7.3	14
0039	Phone Directory Administration	5	5.8	32

These members are junior to most of the jobs in the field, averaging only 5 years in the service. The predominant paygrade is E-4, and half the members are in their first enlistment. Members serve primarily in the 7th Communications Group and Air Combat Command.

Summary

Analysis of the survey data reveal seven clusters and four jobs in the ladder. A wide range of activities are performed by members from magnetic media storage to security management. The senior members of the ladder perform typical supervisory responsibilities. A few members are working outside the specialty such as the switchboard operators. These jobs account for 85 percent of respondents. The remaining 15 percent perform such a wide variety of tasks they could not be grouped into a job or cluster of jobs. As listed above in the career ladder introduction, job titles ranged from data processor to system monitor.

COMPARISON OF CURRENT JOB STRUCTURE TO PREVIOUS STUDY

The results of the specialty job analysis were compared to those of the last Communications-Computer Systems Operator OSR published in 1988. As shown in Table 5, 10 jobs and clusters of jobs in the current study were also identified in 1988. The only job cluster not found in the 1988 survey is the Database Management/Network Administration cluster. This is a relatively new function that is still being defined by the Air Force Career Field Manager. At the time of the survey the technical school had not yet started to teach a block concerning Network Administration. As of January 1995, more than a thousand 3-skill level members have graduated from the basic course with training in Network Administration. Another notable change is the decrease of personnel working in the mainframe operations jobs. In 1988, 24 percent of the sample performed mainframe operations; currently, the percentage is down to 14 percent, and the career field is phasing these jobs out in favor of networks of personal computers and other small computer systems.

TABLE 5

SPECIALTY JOB COMPARISONS BETWEEN CURRENT AND 1988 SURVEYS

CURRENT SURVEY (N=2,809)	PERCENT OF SAMPLE	1988 SURVEY (N=2,673)	PERCENT OF SAMPLE
CONSOLE OPERATIONS CLUSTER	14	COMPUTER OPERATIONS PERSONNEL CLUSTER	24
RECORD COMMUNICATIONS CLUSTER	31	COMMUNICATIONS OPERATIONS PERSONNEL	32
DATABASE/NETWORK ADMINISTRATION CLUSTER	10	-	
TAPE LIBRARIAN JOB	2	MAGNETIC MEDIA LIBRARIANS	3
ENTRY-LEVEL OPERATOR CLUSTER	2	PRODUCTION CONTROL PERSONNEL	5
SECURITY CLUSTER	9	COMSEC ACCOUNTANTS SECURITY MANAGERS	6 1
SUPERVISION CLUSTER	12	COMM-COMPUTER SUPERVISORS	13
TRAINING CLUSTER	1	TECHNICAL SCHOOL PERSONNEL	1
TEST AND EVALUATION JOB	>1	SYSTEMS TESTING PERSONNEL	>1
ADPE CLUSTER	3	RESOURCE MANAGERS	1
SWITCHBOARD OPERATIONS JOB	2	SWITCHBOARD OPERATORS	2
NOT GROUPED	14	NOT GROUPED	11

- Indicates no match in report

SKILL AND EXPERIENCE ANALYSIS

Analysis of DAFSC Groups

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as AFMAN 36-2108 *Specialty Descriptions* and the STS, reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the specialty jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across the skill-level groups. A typical pattern of progression is present, with personnel spending relatively more time on duties involving supervisory, managerial, and training tasks as they move upward toward the 7-skill level. It is also obvious, though, that 7-skill level personnel are still involved with technical task performance, as will be pointed out in the specific skill-level group discussions below.

Skill-Level Descriptions

DAFSC 3C031. The 382 3-skill level airmen (representing 14 percent of the survey sample) perform an average of only 52 tasks, just short of the career ladder average of 62 tasks. Performing a diverse and technical job, members spend 43 percent of their time performing general communications-computer system and system operator activities, 15 percent performing routine security tasks, and 14 percent processing messages (see Table 7). Table 8 displays representative tasks performed by the highest percentages of these airmen.

DAFSC 3C051. The 1,640 5-skill level airmen (58 percent of the survey sample) perform an average of 61 tasks. At the 5-skill level, members perform a greater diversity of jobs than the 3-skill levels as shown in Table 6. This diversity is also shown in Table 7; members spend their time evenly in four different areas, E, F, I, and Q. Table 9 displays representative tasks performed by the highest percentages of these airmen. Members are distinguished from their 3-skill level counterparts by the greater number of tasks and the amount of supervision they perform (see Table 10).

DAFSC 3C071. The NCOs in the 7-skill level group (28 percent of the survey sample) perform an average of 69 tasks. Thirty-nine percent of their relative job time is spent on the usual supervisory, managerial, and training duties (see Table 7). While the display of tasks in Table 11 clearly shows supervisory responsibilities, it also reflects some technical work in the areas of security and record communications. Table 12 displays those tasks that more clearly differentiate between the 5-skill level and 7-skill level groups. Overall, these three tables show us 7-skill level members spend more than twice as much time performing supervisory tasks than their 5-skill level counterparts.

TABLE 6

DISTRIBUTION OF MEMBERS BY DAFSC ACROSS
CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)

JOB	DAFSC 3C031 (N=382)	DAFSC 3C051 (N=1,640)	DAFSC 3C071 (N=776)
CONSOLE OPERATIONS CLUSTER	15	16	9
RECORD COMMUNICATIONS CLUSTER	41	36	16
DATABASE/NETWORK ADMIN CLUSTER	6	10	10
TAPE LIBRARIAN JOB	4	2	1
ENTRY-LEVEL OPERATOR CLUSTER	5	2	1
SECURITY CLUSTER	5	8	13
SUPERVISION CLUSTER	0	4	33
TRAINING CLUSTER	0	*	1
TEST AND EVALUATION JOB	0	*	*
ADPE CLUSTER	2	4	4
SWITCHBOARD OPERATIONS JOB	4	1	1
NOT GROUPED	18	14	10

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF DAFSC GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES	DAFSC		
	3C031 (N=382)	3C051 (N=1,640)	3C071 (N=776)
A. ORGANIZING AND PLANNING	2	5	12
B. DIRECTING AND IMPLEMENTING	1	3	9
C. INSPECTING AND EVALUATING	*	3	11
D. TRAINING	1	5	7
E. PERFORMING GENERAL COMMUNICATIONS-COMPUTER SYSTEMS ACTIVITIES	18	16	12
F. PERFORMING COMMUNICATIONS-COMPUTER SYSTEMS OPERATOR ACTIVITIES	25	19	11
G. PERFORMING PRODUCTION CONTROL OR SYSTEMS MONITOR ACTIVITIES	2	2	1
H. PERFORMING GENERAL COMMUNICATIONS ACTIVITIES	1	1	*
I. PROCESSING MESSAGES	14	11	4
J. PERFORMING TELECOMMUNICATIONS TRAFFIC ANALYSIS ACTIVITIES	1	1	1
K. PERFORMING MAGNETIC MEDIA LIBRARY ACTIVITIES	6	4	1
L. PERFORMING COMMUNICATIONS-COMPUTER MOBILITY ACTIVITIES	2	1	1
M. OPERATING NON MOBILE TELEPHONE SWITCHBOARDS	4	2	*
N. PERFORMING SOFTWARE PLANNING AND DESIGN	*	1	2
O. PERFORMING SOFTWARE DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE	2	3	3
P. PERFORMING SOFTWARE TESTING, QUALITY ASSURANCE, AND CONFIGURATION MANAGEMENT ACTIVITIES	*	1	1
Q. MAINTAINING SECURITY	15	16	15
R. PERFORMING SUPPLY OR CONTRACTING ACTIVITIES	3	4	6

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 3C031 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=382)
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	62
E84	Distribute messages or output products	61
F147	Perform communications-computer systems startup or shutdown procedures	59
F146	Perform communications-computer systems equipment power-on or power-off procedures	59
F141	Mount or dismount magnetic media	58
E106	Respond to inquiries from customers, such as computer job or message status	58
Q436	Escort visitors through facilities	57
E100	Monitor operational status of equipment	55
E99	Make entries on shift supervisor logs or master station logs (MSLs)	53
F131	Label magnetic media	53
F126	Interpret indicating lights on peripheral equipment	52
Q433	Destroy or dispose of classified or sensitive unclassified materials	51
F156	Respond to system requests	49
E105	Process output products	48
F151	Perform or practice communications-computer systems emergency procedures	47
E104	Prepare unclassified media for mail, delivery, or distribution	46
F114	Analyze console displays or system printouts	45
Q468	Store or safeguard classified materials	44
F155	Request system information via consoles	44
Q435	Distribute classified materials	44
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	43
I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced	43
I211	Respond to service messages	43
I194	Follow up service messages	43
F152	Perform recovery procedures on communications-computer systems	42
Q469	Verify access to restricted or controlled areas or classified materials	42
I213	Separate incoming messages for distribution	42
I199	Maintain service message logs or files	42
I214	Stamp messages with special handling, precedence, or classification	41
E101	Notify addressees or distribution centers of high precedence message receipt	39
F149	Perform operator maintenance on communications-computer systems equipment	39

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TABLE 9

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 3C051 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=1,640)
Q436	Escort visitors through facilities	67
Q433	Destroy or dispose of classified or sensitive unclassified materials	56
E100	Monitor operational status of equipment	55
E99	Make entries on shift supervisor logs or master station logs (MSLs)	54
F147	Perform communications-computer systems startup or shutdown procedures	54
F146	Perform communications-computer systems equipment power-on or power-off procedures	53
E84	Distribute messages or output products	53
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	53
E106	Respond to inquiries from customers, such as computer job or message status	51
D58	Conduct OJT	50
E80	Assist users in resolving computer software malfunctions or problems	49
F141	Mount or dismount magnetic media	48
Q470	Witness destruction of classified materials	48
Q468	Store or safeguard classified materials	46
Q441	Inventory classified or communications security (COMSEC) materials	45
Q435	Distribute classified materials	44
Q469	Verify access to restricted or controlled areas or classified materials	44
A3	Determine or establish work priorities	44
F129	Isolate causes of machine stops or malfunctions	43
F156	Respond to system requests	43
F126	Interpret indicating lights on peripheral equipment	42
F155	Request system information via consoles	42
F149	Perform operator maintenance on communications-computer systems equipment	40
F131	Label magnetic media	40
I211	Respond to service messages	40
E105	Process output products	40
F151	Perform or practice communications-computer systems emergency procedures	39
F152	Perform recovery procedures on communications-computer systems	38
F114	Analyze console displays or system printouts	37
A6	Develop work methods or procedures	37
F135	Maintain operations of peripheral equipment	37
I194	Follow up service messages	37
Q445	Maintain visitor registers	37

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 3C031 AND DAFSC 3C051 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		3C031 (N=382)	3C051 (N=1,640)	DIFFERENCE
D58	Conduct OJT	22	50	28
B33	Supervise Communications-Computer Systems Operators (AFSC 3C051)	0	27	27
C52	Write EPRs	1	25	24
A3	Determine or establish work priorities	20	44	24
B20	Counsel personnel on personal or military-related matters	4	28	24
C42	Evaluate personnel for compliance with performance standards	2	24	22
D68	Evaluate progress of trainees	5	26	21
A6	Develop work methods or procedures	17	38	21
D61	Counsel trainees on training progress	6	26	20
A9	Establish performance standards for subordinates	2	22	20

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY
DAFSC 3C071 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=776)
A3	Determine or establish work priorities	74
B20	Counsel personnel on personal or military-related matters	71
C52	Write EPRs	70
C42	Evaluate personnel for compliance with performance standards	63
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	63
A6	Develop work methods or procedures	62
B29	Interpret policies, directives, or procedures for subordinates	61
C53	Write recommendations for awards or decorations	61
B33	Supervise Communications-Computer Systems Operators (AFSC 49151)	59
A13	Plan or schedule work assignments	58
A16	Schedule leaves or passes	58
Q436	Escort visitors through facilities	57
A9	Establish performance standards for subordinates	56
D58	Conduct OJT	52
E80	Assist users in resolving computer software malfunctions or problems	51
A4	Determine requirements for space, personnel, equipment or supplies	50
Q433	Destroy or dispose of classified or sensitive unclassified materials	46
D61	Counsel trainees on training progress	45
E83	Coordinate with subscribers or customers on operational or procedural matters	45
A1	Assign personnel to duty positions	45
A11	Plan briefings	44
D70	Maintain training records, charts, or graphs	44
E100	Monitor operational status of equipment	43
D68	Evaluate progress of trainees	43
C36	Analyze workload requirements	42
C43	Evaluate personnel for demotion, reclassification, or special awards	42
Q468	Store or safeguard classified materials	41
Q469	Verify access to restricted or controlled areas or classified materials	40
C47	Evaluate work schedules	40
C41	Evaluate maintenance or use of workspace, equipment, or supplies	39
Q470	Witness destruction of classified materials	38

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 3C051 AND DAFSC 3C071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		3C051 (N=1,640)	3C071 (N=776)	DIFFERENCE
I211	Respond to service messages	40	17	23
F141	Mount or dismount magnetic media	48	26	22
I194	Follow up service messages	37	15	22
I214	Stamp messages with special handling, precedence, or classification	35	13	22
E99	Make entries on shift supervisor logs or master station logs (MSLs)	54	33	21
E84	Distribute messages or output products	53	32	21
I199	Maintain service message logs or files	36	16	20
C52	Write EPRs	25	70	-45
C53	Write recommendations for awards or decorations	17	61	-44
B20	Counsel personnel on personal or military-related matters	28	71	-43
A16	Schedule leaves or passes	18	58	-40
C42	Evaluate personnel for compliance with performance standards	24	63	-39
B29	Interpret policies, directives, or procedures for subordinates	23	61	-38
A13	Plan or schedule work assignments	24	58	-34
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	30	63	-33
A9	Establish performance standards for subordinates	23	56	-33

Summary

Three-skill level and 5-skill level airmen perform many tasks in common, and both groups spend the vast majority of their relative job time performing communications activities dealing with messages or security or both. The 7-skill level group performs many supervisory and management tasks as well as the technical tasks performed by 3- and 5-skill level members.

ANALYSIS OF AFMAN 36-2108 *SPECIALTY DESCRIPTIONS*

Survey data were compared to the AFMAN 36-2108 *Specialty Descriptions* for Communications-Computer Systems Operator, dated 30 April 1991.

The combined 3- and 5-skill level S*pecialty Description* appears complete and accurately portrays the range and technical nature of the job with a definite shift in emphasis from mainframe operations to network administration. The description for the craftsman (AFSC 3C071) accurately reflects both the supervisory and the previously discussed technical nature of the job.

TRAINING ANALYSIS

Occupational surveys provide sources of information that can be used to assist in the development of training programs relevant to the needs of personnel in their first enlistment. Factors that may be used in evaluating training include the overall description of the job being performed by first-enlistment personnel and their distribution across career ladder jobs. Percentage members performing specific tasks or using certain equipment or tools are available for first job (1-24 months' TAFMS) or first enlistment (1-48 months)

First-Enlistment Personnel

In this study there are 850 members in their first enlistment (1-48 months' TAFMS), representing 30 percent of the survey sample. The jobs performed by these personnel are primarily in two areas, although members are found in eight different jobs (see Figure 2). The first area is Record Communications, and as described in the career ladder descriptions, members spend their time processing messages and tracking printed communications materials. The second job is the Console Operations cluster. These members operate mainframe consoles and manage the orderly distribution of computer printouts and other computer products. Tables 13 and 14 describe the work performed by these members with a listing of time spent in duties and the top tasks performed by them.

TE and TD Data

TE and TD are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel training (TE), along with a measure of the difficulty of the JI tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can then be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators

AFSC 3C0X1
FIRST-ENLISTMENT JOBS

CONSOLE
OPERATIONS
CLUSTER 18%

SWITCHBOARD
Operations Job
3%

DATABASE/
NETWORK
ADMIN 8%

TAPE
LIBRARIAN
6%

SECURITY
CLUSTER 4%

ENTRY-LEVEL
OPERATOR CLUSTER
5%

NOT
GROUPED
6%

ADPE
CLUSTER 2%

RECORD
COMMUNICATIONS
47%

FIGURE 2

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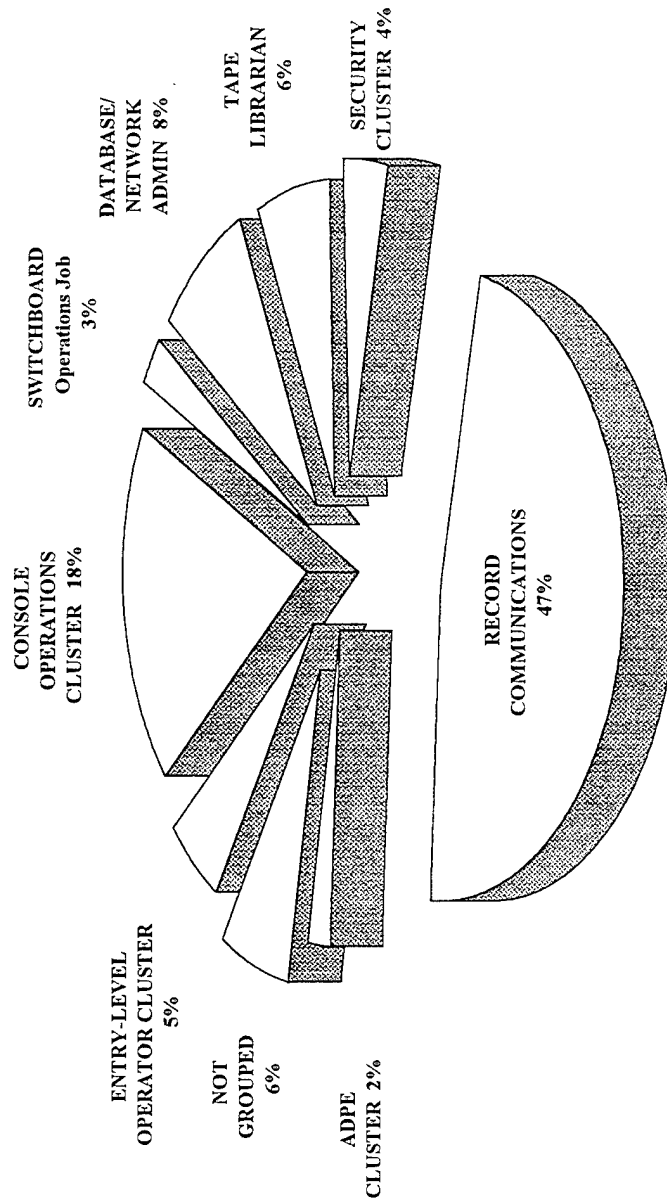
TABLE 13

RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY
FIRST-ENLISTMENT AFSC 3C0X1 PERSONNEL

DUTIES	PERCENT TIME SPENT
A. ORGANIZING AND PLANNING	2
B. DIRECTING AND IMPLEMENTING	1
C. INSPECTING AND EVALUATING	1
D. TRAINING	2
E. PERFORMING GENERAL COMMUNICATIONS-COMPUTER SYSTEMS ACTIVITIES	18
F. PERFORMING COMMUNICATIONS-COMPUTER SYSTEMS OPERATOR ACTIVITIES	24
G. PERFORMING PRODUCTION CONTROL OR SYSTEMS MONITOR ACTIVITIES	2
H. PERFORMING GENERAL COMMUNICATIONS ACTIVITIES	1
I. PROCESSING MESSAGES	14
J. PERFORMING TELECOMMUNICATIONS TRAFFIC ANALYSIS ACTIVITIES	1
K. PERFORMING MAGNETIC MEDIA LIBRARY ACTIVITIES	5
L. PERFORMING COMMUNICATIONS-COMPUTER MOBILITY ACTIVITIES	2
M. OPERATING NON MOBILE TELEPHONE SWITCHBOARDS	3
N. PERFORMING SOFTWARE PLANNING AND DESIGN	1
O. PERFORMING SOFTWARE DEVELOPMENT, IMPLEMENTATION, AND MAINTENANCE	2
P. PERFORMING SOFTWARE TESTING, QUALITY ASSURANCE, AND CONFIGURATION MANAGEMENT ACTIVITIES	1
Q. MAINTAINING SECURITY	15
R. PERFORMING SUPPLY OR CONTRACTING ACTIVITIES	3

NOTE: Time Spent does not total 100 percent due to rounding

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY
FIRST-ENLISTMENT AFSC 3C0X1 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=850)
Q436	Escort visitors through facilities	63
F147	Perform communications-computer systems startup or shutdown procedures	60
F146	Perform communications-computer systems equipment power-on or power-off procedures	60
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	59
E84	Distribute messages or output products	59
F141	Mount or dismount magnetic media	56
E100	Monitor operational status of equipment	55
E99	Make entries on shift supervisor logs or master station logs (MSLs)	54
E106	Respond to inquiries from customers, such as computer job or message status	54
Q433	Destroy or dispose of classified or sensitive unclassified materials	52
F126	Interpret indicating lights on peripheral equipment	48
F156	Respond to system requests	48
F131	Label magnetic media	47
F151	Perform or practice communications-computer systems emergency procedures	46
E105	Process output products	46
I211	Respond to service messages	45
Q470	Witness destruction of classified materials	45
E104	Prepare unclassified media for mail, delivery, or distribution	44
Q435	Distribute classified materials	44
E80	Assist users in resolving computer software malfunctions or problems	43
Q468	Store or safeguard classified materials	43
I194	Follow up service messages	43
F155	Request system information via consoles	43
I199	Maintain service message logs or files	42
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	42
F114	Analyze console displays or system printouts	42
F129	Isolate causes of machine stops or malfunctions	42
F149	Perform operator maintenance on communications-computer systems equipment	41
I214	Stamp messages with special handling, precedence, or classification	41
I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced	41
I213	Separate incoming messages for distribution	41
Q469	Verify access to restricted or controlled areas or classified materials	41

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correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 1, AETCR 52-22, and allow course personnel to quickly focus their attention on those tasks that are most likely to qualify for ABR course consideration.

Tasks having the highest TE ratings are listed in Table 15. Included for each task are the percentage of first-job and first-enlistment personnel performing and the TD rating. As illustrated by the tasks, most apply to the operating procedures of communications and computer systems.

Table 16 lists the tasks having the highest TD ratings. The percentages of first-job, first-enlistment, 5-, and 7-skill level personnel performing, and the TE rating are also included for each task. The majority of tasks with high difficulty are not performed by high percentages of any criterion group. Most tasks are advanced operating procedures, such as designing remote terminal networks or drafting configuration management plans.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate, ATI information, are contained in the Training Extract package and should be reviewed in detail by technical school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.)

Specialty Training Standard (STS)

A comprehensive review of the STS created at the January 1995 U&TW was made by comparing survey data to STS elements. Subject-matter experts from the Technical School matched JI tasks to appropriate STS sections and subsections. A complete computer listing displaying the percent members performing tasks, TE and TD ratings for each task, along with the STS matchings, has been forwarded to the technical school for their review of the training documents.

Typically, STS sections and subsections matched to tasks which have sufficiently high TE and TD ratings, and are performed by at least 20 percent or more personnel in appropriate experience or skill-level groups (such as first-enlistment (1-48 months' TAFMS) and 5- and 7-skill level groups), are considered to be supported and should be considered for inclusion in the STS. Likewise, paragraphs having tasks with less than 20 percent performing across all of the criterion groups should be considered for deletion from the STS.

In this career ladder, major changes in technology have driven changes in the STS. In January 1994, the technical school added a block covering Network and System Administration. The also reduced the emphasis on Console Operations in the basic course. These changes match the descriptions in the Specialty Comparison to Previous Study section of this report. The console operations mission is declining because the Air Force is finding less and less utility in the mainframe type computer system. Except for Space Command and a few select locations, the Communications-Computer Operations ladder is focused on using small computer networks

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TABLE 15

TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING		TSK DIFF
			1ST JOB	1ST ENL	
F152	Perform recovery procedures on communications-computer systems	6.61	41	40	5.59
F147	Perform communications-computer systems startup or shutdown procedures	6.36	61	60	4.57
F135	Maintain operations of peripheral equipment	6.31	40	40	4.23
F146	Perform communications-computer systems equipment power-on or power-off procedures	6.28	60	60	4.35
F129	Isolate causes of machine stops or malfunctions	6.22	39	42	5.66
F134	Load operating systems	6.19	24	27	4.87
I211	Respond to service messages	6.14	44	45	4.37
F151	Perform or practice communications-computer systems emergency procedures	5.97	47	46	4.62
F156	Respond to system requests	5.89	48	48	4.10
I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced	5.83	42	41	4.56
F149	Perform operator maintenance on communications-computer systems equipment	5.83	40	42	4.10
E84	Distribute messages or output products	5.75	60	59	3.54
E101	Notify addressees or distribution centers of high precedence message receipt	5.72	40	40	3.22
E100	Monitor operational status of equipment	5.72	53	55	3.94
F130	Isolate problems on production runs	5.61	18	18	5.78
F126	Interpret indicating lights on peripheral equipment	5.61	49	48	4.18
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	5.56	43	42	3.67
E105	Process output products	5.53	48	46	3.48
I189	Assign routing indicators	5.53	31	35	3.79
Q433	Destroy or dispose of classified or sensitive unclassified materials	5.44	51	52	4.08
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	5.42	64	59	3.41
Q468	Store or safeguard classified materials	5.42	42	43	4.10
F127	Interpret indicating or register lights on central processing units (CPUs) or mainframes	5.42	24	27	4.82
F121	Correct stoppages on communications-computer systems peripheral equipment	5.39	37	39	4.81
F155	Request system information via consoles	5.39	42	43	4.11
E106	Respond to inquiries from customers, such as computer job or message status	5.36	55	54	4.06

TE MEAN = S.D. = (HIGH =)
TD MEAN = 5.00; S.D. = 1.00

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TABLE 16

TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		TSK DIFF	PERCENT MEMBERS PERFORMING				TNG EMP
			1ST JOB	1ST ENL	3C051	3C071	
N291	Design remote terminal networks	7.08	2	3	4	6	.42
O329	Analyze system dumps	7.07	3	4	4	4	1.14
O393	Write database run streams utilizing database routines, such as query language processors (QLPs)	6.99	0	1	2	2	.94
P401	Draft or write configuration management plans	6.91	0	1	1	2	.36
C54	Write staff studies, surveys, or special reports, other than training reports	6.90	1	2	7	30	.33
N318	Prepare recommendations for size and capacity of proposed communications-computer systems equipment	6.89	0	1	3	6	.22
N293	Determine communications-computer systems data security requirements	6.82	2	3	5	10	.81
N314	Perform or participate in technical feasibility studies	6.81	1	1	2	5	.72
N295	Determine communications-computer systems interface or integration requirements	6.79	0	2	3	8	.61
O394	Write job control run streams	6.78	0	2	3	3	1.00
C51	Write civilian performance ratings or supervisory appraisals	6.77	0	1	2	12	.47
P409	Perform database conversions	6.77	1	2	5	5	.47
D63	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	6.75	0	2	5	10	.19
N312	Perform or participate in economical feasibility studies	6.73	0	1	1	5	.72
A7	Draft budget requirements	6.68	2	3	6	27	.39
O395	Write job parameter statements	6.67	0	1	2	1	.83
N313	Perform or participate in operational feasibility studies	6.66	1	2	3	7	.86
P402	Evaluate changes to computer nets or networks	6.63	1	3	5	10	.61
N319	Review communications-computer systems interface or integration requirements	6.63	0	1	2	5	.22
N323	Review programming standards	6.63	0	1	1	3	.22
N322	Review data systems project plans	6.61	0	1	2	5	.22

TD MEAN = 5.00; S.D. = 1.00
TE MEAN = ; S.D. = (HIGH =)

(which is what was added to the STS in 1994). The current analysis of the STS, however, had no tasks matched to this new section of STS. The sections of the STS that are matched are well supported.

At the end of the Training Extract is a listing of the tasks not referenced to the STS. Many of these had high ratings on training emphasis but they related to the declining mainframe operator responsibilities. Examples of those with high TE include isolating problems on production runs, requesting system information via consoles, and performing or practicing communications-computer systems emergency procedures.

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors that may affect the job performance of airmen in the career ladder. Questions covering job interest, perceived utilization of talents and training, sense of accomplishment gained from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction. The responses of the current survey sample were then analyzed by making several comparisons: (1) among TAFMS groups of the Communications-Computer Systems Operator career ladder and a comparative sample of personnel from other Direct Support career ladders surveyed in 1993 (AFSCs 1T1X1, 2R0X1, and 2R1X1); (2) between current and previous survey experience groups; and (3) across specialty groups identified in the **SPECIALTY JOBS** section of the report.

Table 17 presents job satisfaction data for AFSC 3C0X1 TAFMS groups together with data for a comparative sample surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 3C0X1 personnel compares with similar Air Force specialties. Communications-Computer Systems Operator personnel reported much lower job satisfaction than members of the comparative sample. Overall, satisfaction for all three TAFMS groups in AFSC 3C0X1 is generally positive; however, first and second enlistment personnel were much less enthusiastic about the use of their training and talents than similar direct support personnel recently surveyed. These do not appear to signal serious satisfaction problems, though, since reenlistment intentions are positive and similar.

Comparison of job satisfaction responses of the current survey TAFMS groups to TAFMS groups in the 1988 survey of AFSC 491X1 survey (see Table 18) indicates that generally the current responses are as positive as the 1988 responses. First-enlistment personnel are the only group that shows a noteworthy decline in their expressed job interest and their perceived use of talents.

An examination of job satisfaction data can also reveal the influences performing certain jobs may have on overall job satisfaction. Table 19 presents job satisfaction data for the major jobs identified in the career ladder structure for AFSC 3C0X1. Job satisfaction indicators for the Tape Librarian job and Switchboard Operator job were the lowest for any of the jobs, while the Database Management/Network Administration and Supervisor clusters had the highest indicators.

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TABLE 17

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 3C0X1 TAFMS GROUPS IN CURRENT STUDY TO A COMPARATIVE SAMPLE (PERCENT MEMBERS RESPONDING)*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	3C0X1 (N=850)	COMP SAMPLE (N=767)	3C0X1 (N=752)	COMP SAMPLE (N=700)	3C0X1 (N=1,206)	COMP SAMPLE (N=1,514)
EXPRESSED JOB INTEREST:						
INTERESTING	50	66	56	72	69	76
SO-SO	22	22	17	18	16	14
DULL	28	12	26	10	14	9
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	57	70	66	79	76	83
NONE TO VERY LITTLE	43	30	35	21	23	17
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	67	90	59	83	65	79
NONE TO VERY LITTLE	33	10	40	17	35	21
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	50	72	55	75	67	75
NEUTRAL	20	16	14	9	11	8
DISSATISFIED	30	12	30	16	22	17
RE-ENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	60	64	71	79	75	70
NO OR PROBABLY NO	40	36	29	21	8	10
WILL RETIRE	0	0	0	0	17	19

Comparative data are from AFSCs 1T1X1, 2R0X1, and 2R1X1 surveyed in 1993

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TABLE 18

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 3C0X1 TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY (PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	3C0X1 (N=850)	1988 491X1 (N=967)	3C0X1 (N=752)	1988 491X1 (N=692)	3C0X1 (N=1,206)	1988 491X1 (N=1,014)
EXPRESSED JOB INTEREST:						
INTERESTING	50	60	56	57	69	68
SO-SO	22	19	17	21	16	15
DULL	28	21	26	23	14	16
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	57	67	66	66	76	72
NONE TO VERY LITTLE	43	33	35	34	23	28
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	67	71	59	66	65	61
NONE TO VERY LITTLE	33	29	40	34	35	38
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	50	**	55	**	67	**
NEUTRAL	20	**	14	**	11	**
DISSATISFIED	30	**	30	**	22	**
RE-ENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	60	57	71	65	75	71
NO OR PROBABLY NO	40	42	29	35	8	11
WILL RETIRE		0		0	17	18

NOTE: Columns may not add to 100 percent due to rounding or non response

**   Data not available for these questions

TABLE 19

JOB SATISFACTION INDICATORS FOR AFSC 3C0X1 JOBS
(PERCENT MEMBERS RESPONDING)

	CONSOLE OPERATIONS CLUSTER (N=387)	RECORD COMM CLUSTER (N=866)	DBASE/NET ADMIN CLUSTER (N=268)	TAPE LIBRARIAN JOB (N=53)	ENTRY-LVL OPERATOR CLUSTER (N=57)	SECURITY CLUSTER (N=254)
EXPRESSED JOB INTEREST:						
INTERESTING	47	47	91	30	42	76
SO-SO	23	25	6	32	30	13
DULL	30	28	3	38	28	11
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	57	58	94	53	53	79
NONE TO VERY LITTLE	43	41	5	47	47	20
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	64	78	69	59	65	53
NONE TO VERY LITTLE	35	22	30	42	35	47
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	50	47	85	40	46	70
NEUTRAL	16	20	5	25	23	14
DISSATISFIED	35	33	9	36	32	16
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	75	69	73	45	56	80
NO OR PROBABLY NO	19	27	22	49	40	12
WILL RETIRE	6	4	5	4	4	8

NOTE: Columns may not add to 100 percent due to rounding or non response

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TABLE 19 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 3C0X1 JOBS
(PERCENT MEMBERS RESPONDING)

	SUPERVISION CLUSTER (N=330)	TRAINING CLUSTER (N=19)	TEST & EVAL JOB (N=7)	ADPE CLUSTER (N=96)	SWITCHBOARD OPERATIONS (N=44)
EXPRESSED JOB INTEREST:					
INTERESTING	78	79	71	80	30
SO-SO	12	16	14	11	20
DULL	10	5	14	8	48
PERCEIVED USE OF TALENTS:					
FAIRLY WELL TO PERFECT	84	89	85	80	36
NONE TO VERY LITTLE	16	11	14	20	64
PERCEIVED USE OF TRAINING:					
FAIRLY WELL TO PERFECT	68	52	57	35	16
NONE TO VERY LITTLE	32	47	43	65	84
SENSE OF ACCOMPLISHMENT FROM JOB:					
SATISFIED	74	84	43	78	41
NEUTRAL	6	5	14	9	25
DISSATISFIED	20	11	43	13	34
RE-ENLISTMENT INTENTIONS:					
YES OR PROBABLY YES	68	58	71	77	61
NO OR PROBABLY NO	9	21	14	17	39
WILL RETIRE	22	21	14	6	0

NOTE: Columns may not add to 100 percent due to rounding or non response

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IMPLICATIONS

In general, training for this career ladder is on track. Technical training has gone through major changes within this career ladder because of the technological advancement that is driving changes in the field. The former core job of the ladder was mainframe operations. In a lot of circumstances in today's computing environments, many mainframe systems are being phased out in favor of distributed network systems of fileservers and personal computers. Formal training on mainframe systems is shrinking in response. The leadership of the career ladder is taking a realistic view of the field and is excited to hear more about the changing structure in future surveys of the ladder.

APPENDIX A

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TABLE A1

CONSOLE OPERATIONS CLUSTER
(STG266)

TASKS		PERCENT MEMBERS PERFORMING (N=387)
F141	Mount or dismount magnetic media	93
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	89
F147	Perform communications-computer systems startup or shutdown procedures	87
F146	Perform communications-computer systems equipment power-on or power-off procedures	87
F156	Respond to system requests	86
F131	Label magnetic media	86
E100	Monitor operational status of equipment	83
Q436	Escort visitors through facilities	82
E99	Make entries on shift supervisor logs or master station logs (MSLs)	81
F126	Interpret indicating lights on peripheral equipment	77
F155	Request system information via consoles	76
F135	Maintain operations of peripheral equipment	72
E106	Respond to inquiries from customers, such as computer job or message status	72
F129	Isolate causes of machine stops or malfunctions	72
F149	Perform operator maintenance on communications-computer systems equipment	71
E91	Initialize processing, such as batch job, on-line, or off-line	70
F121	Correct stoppages on communications-computer systems peripheral equipment	69
E90	Identify tape failures	68
F114	Analyze console displays or system printouts	67
F151	Perform or practice communications-computer systems emergency procedures	67
F152	Perform recovery procedures on communications-computer systems	66
E105	Process output products	65
D58	Conduct OJT	64
K226	Clean magnetic media	63
E84	Distribute messages or output products	62
F158	Set or reset computer time clocks	59
E80	Assist users in resolving computer software malfunctions or problems	58
F117	Check out magnetic media from libraries	58
F127	Interpret indicating or register lights on central processing units (CPUs) or mainframes	58
Q469	Verify access to restricted or controlled areas or classified materials	56
Q433	Destroy or dispose of classified or sensitive unclassified materials	55

TABLE A2

BASIC CONSOLE OPERATOR JOB
(STG497)

TASKS		PERCENT MEMBERS PERFORMING (N=184)
F141	Mount or dismount magnetic media	98
F156	Respond to system requests	96
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	92
F147	Perform communications-computer systems startup or shutdown procedures	89
F146	Perform communications-computer systems equipment power-on or power-off procedures	89
F131	Label magnetic media	85
E99	Make entries on shift supervisor logs or master station logs (MSLs)	84
F155	Request system information via consoles	84
E100	Monitor operational status of equipment	80
F126	Interpret indicating lights on peripheral equipment	80
E91	Initialize processing, such as batch job, on-line, or off line	78
F149	Perform operator maintenance on communications-computer systems equipment	77
Q436	Escort visitors through facilities	77
E106	Respond to inquiries from customers, such as computer job or message status	73
F129	Isolate causes of machine stops or malfunctions	72
F152	Perform recovery procedures on communications-computer systems	72
F114	Analyze console displays or system printouts	71
F135	Maintain operations of peripheral equipment	70
F121	Correct stoppages on communications-computer systems peripheral equipment	70
F151	Perform or practice communications-computer systems emergency procedures	67
E105	Process output products	66
F136	Make entries on work or run requests, such as initials, remarks, or panel readings	60
E84	Distribute messages or output products	60
E90	Identify tape failures	60
F158	Set or reset computer time clocks	59
K226	Clean magnetic media	58
D58	Conduct OJT	57
F127	Interpret indicating or register lights on central processing units (CPUs) or mainframes	56
F150	Perform operator maintenance on temperature or humidity recording devices	55
F117	Check out magnetic media from libraries	53
F137	Monitor data flow	51
E108	Review computer output products	48
F160	Transfer programs or data from one media to another media	48
F134	Load operating systems	48
G164	Burst or decollate printed output products	44
F113	Adjust run sequence	43

TABLE A3

OPERATIONS AND SECURITY JOB
(STG559)

TASKS		PERCENT MEMBERS PERFORMING (N=7)
Q468	Store or safeguard classified materials	100
Q436	Escort visitors through facilities	100
F135	Maintain operations of peripheral equipment	100
F156	Respond to system requests	100
F149	Perform operator maintenance on communications-computer systems equipment	100
F147	Perform communications-computer systems startup or shutdown procedures	100
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	100
Q433	Destroy or dispose of classified or sensitive unclassified materials	100
F146	Perform communications-computer systems equipment power-on or power-off procedures	100
Q469	Verify access to restricted or controlled areas or classified materials	86
E100	Monitor operational status of equipment	86
R484	Inspect tools, supplies, or equipment	86
F158	Set or reset computer time clocks	86
Q430	Change lock combinations for safes, vaults, or cipher locks	86
F160	Transfer programs or data from one media to another media	71
R485	Inventory tools, supplies, or equipment	71
Q465	Sanitize sites or equipment upon completion of classified processing	71
Q446	Mark or stamp sensitive unclassified or classified information, other than messages	71
Q470	Witness destruction of classified materials	71
F134	Load operating systems	71
Q432	Designate classified materials for destruction	71
F116	Change systems hardware configurations	71
F157	Review input data	57
F155	Request system information via consoles	57
Q466	Secure site or equipment for classified processing	57
R491	Place tools, supplies, or equipment in storage	57
F129	Isolate causes of machine stops or malfunctions	57
R481	Establish or maintain hand receipt files	57
F150	Perform operator maintenance on temperature or humidity recording devices	57
Q429	Assign user identifications (IDs) or passwords	57
F121	Correct stoppages on communications-computer systems peripheral equipment	57
A3	Determine or establish work priorities	43
E80	Assist users in resolving computer software malfunctions or problems	43
F141	Mount or dismount magnetic media	43
E105	Process output products	43
F114	Analyze console displays or system printouts	43

TABLE A4

BASE COMMUNICATIONS CENTER CLUSTER
(STG204)

TASKS		PERCENT MEMBERS PERFORMING (N=866)
I211	Respond to service messages	92
I199	Maintain service message logs or files	86
I194	Follow up service messages	86
I213	Separate incoming messages for distribution	85
E84	Distribute messages or output products	84
I214	Stamp messages with special handling, precedence, or classification	84
E99	Make entries on shift supervisor logs or master station logs (MSLs)	84
Q433	Destroy or dispose of classified or sensitive unclassified materials	84
I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced	84
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	83
Q436	Escort visitors through facilities	83
E101	Notify addressees or distribution centers of high precedence message receipt	79
I193	Follow special instructions on messages	78
Q435	Distribute classified materials	77
I189	Assign routing indicators	77
Q470	Witness destruction of classified materials	75
E100	Monitor operational status of equipment	72
I187	Annotate time of transmission or receipt on messages	72
Q441	Inventory classified or communications security (COMSEC) materials	72
F147	Perform communications-computer systems startup or shutdown procedures	72
F146	power-on or power-off procedures	72
I212	Retrieve messages manually	71
E106	Respond to inquiries from customers, such as computer job or message status	71
Q468	Store or safeguard classified materials	68
I188	Assign operating signals	67
I200	Make entries on DD Forms 1503 (Message Correction Notice)	67
I201	Perform alternate routing of message traffic	67
E104	Prepare unclassified media for mail, delivery, or distribution	65
I202	Prepare abbreviated plain address messages	65
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	65
I186	Annotate station serial number on messages	64
Q469	Verify access to restricted or controlled areas or classified materials	64
F151	Perform or practice communications-computer systems emergency procedures	64

TABLE A5

MESSAGE PROCESSING JOB
(STG414)

TASKS		PERCENT MEMBERS PERFORMING (N=660)
I211	Respond to service messages	97
I194	Follow up service messages	91
I213	Separate incoming messages for distribution	90
I199	Maintain service message logs or files	90
Q435	Distribute classified materials	90
I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced	90
I214	Stamp messages with special handling, precedence, or classification	89
E84	Distribute messages or output products	88
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	88
E101	Notify addressees or distribution centers of high precedence message receipt	86
E99	Make entries on shift supervisor logs or master station logs (MSLs)	85
Q433	Destroy or dispose of classified or sensitive unclassified materials	83
I193	Follow special instructions on messages	82
Q436	Escort visitors through facilities	82
I189	Assign routing indicators	79
I212	Retrieve messages manually	75
E106	Respond to inquiries from customers, such as computer job or message status	75
F147	Perform communications-computer systems startup or shutdown procedures	74
F146	Perform communications-computer systems equipment power-on or power-off procedures	74
E100	Monitor operational status of equipment	73
I187	Annotate time of transmission or receipt on messages	73
Q470	Witness destruction of classified materials	73
I200	Make entries on DD Forms 1503 (Message Correction Notice)	73
Q441	Inventory classified or communications security (COMSEC) materials	70
I201	Perform alternate routing of message traffic	70
I188	Assign operating signals	69
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	69
E104	Prepare unclassified media for mail, delivery, or distribution	68
I202	Prepare abbreviated plain address messages	67
I186	Annotate station serial number on messages	65
Q468	Store or safeguard classified materials	65

SECURITY AND SUPERVISION JOB
(STG311)

TASKS		PERCENT MEMBERS PERFORMING (N=128)
Q433	Destroy or dispose of classified or sensitive unclassified materials	92
Q436	Escort visitors through facilities	90
A3	Determine or establish work priorities	88
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	84
Q470	Witness destruction of classified materials	83
D58	Conduct OJT	83
Q430	Change lock combinations for safes, vaults, or cipher locks	83
B20	Counsel personnel on personal or military-related matters	81
Q441	Inventory classified or communications security (COMSEC) materials	80
E100	Monitor operational status of equipment	80
C42	Evaluate personnel for compliance with performance standards	80
A6	Develop work methods or procedures	80
E99	Make entries on shift supervisor logs or master station logs (MSLs)	80
Q468	Store or safeguard classified materials	79
B29	Interpret policies, directives, or procedures for subordinates	79
Q469	Verify access to restricted or controlled areas or classified materials	78
Q445	Maintain visitor registers	77
Q439	Implement cryptographic key changes	76
C52	Write EPRs	75
Q440	Inspect classified materials	73
Q435	Distribute classified materials	73
F146	Perform communications-computer systems equipment power-on or power-off procedures	73
B33	Supervise Communications-Computer Systems Operators (AFSC 49151)	72
A9	Establish performance standards for subordinates	72
E83	Coordinate with subscribers or customers on operational or procedural matters	72
Q447	Page count classified materials	72
E84	Distribute messages or output products	71
Q450	Perform physical security inspections of facilities	71
Q432	Designate classified materials for destruction	70
D61	Counsel trainees on training progress	70
A13	Plan or schedule work assignments	70
F147	Perform communications-computer systems startup or shutdown	70

TABLE A7

MOBILE COMMUNICATIONS JOB
(GP75)

TASKS		PERCENT MEMBERS PERFORMING (N=81)
L261	Set up or dismantle mobile communications-computer systems equipment	92
L256	Perform operations checks or services on vehicles	91
L246	Camouflage mobile communications equipment	87
L257	Prepare communications-computer supplies for field operations	86
L258	Prepare communications-computer systems equipment for operation	82
L255	Perform operational checks of mobile communications equipment, other than convoy equipment	81
Q436	Escort visitors through facilities	80
L250	Palletize equipment	79
L251	Perform guard duties	79
L260	Secure communications-computer systems equipment in vans for movement	79
L249	Maintain mobile administrative support kits	77
L252	Perform initial tests of systems in a mobile environment	77
Q441	Inventory classified or communications security (COMSEC) materials	75
Q433	Destroy or dispose of classified or sensitive unclassified materials	75
E99	Make entries on shift supervisor logs or master station logs (MSLs)	74
Q468	Store or safeguard classified materials	71
F146	Perform communications-computer systems equipment power-on or power-off procedures	69
Q470	Witness destruction of classified materials	69
F147	Perform communications-computer systems startup or shutdown procedures	68
L259	Process calls through mobile telephone equipment	67
I211	Respond to service messages	67
I187	Annotate time of transmission or receipt on messages	66
Q439	Implement cryptographic key changes	66
I189	Assign routing indicators	65
L248	Erect tactical air base contonement areas	64
I199	Maintain service message logs or files	64
L253	Perform mobile communications control center operations	61
I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions	61
I194	Follow up service messages	61
F149	Perform operator maintenance on communications-computer systems equipment	61
E100	Monitor operational status of equipment	60
I214	Stamp messages with special handling, precedence, or classification	60

TABLE A8

DATABASE/NETWORK ADMINISTRATION CLUSTER
(STG67)

TASKS		PERCENT MEMBERS PERFORMING (N=268)
E80	Assist users in resolving computer software malfunctions or problems	94
F160	Transfer programs or data from one media to another media	72
E83	Coordinate with subscribers or customers on operational or procedural matters	71
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	70
F129	Isolate causes of machine stops or malfunctions	69
E106	Respond to inquiries from customers, such as computer job or message status	67
F155	Request system information via consoles	66
F114	Analyze console displays or system printouts	65
A3	Determine or establish work priorities	65
A6	Develop work methods or procedures	63
F120	Coordinate scheduled downtime with main site, office of primary responsibility (OPR), and remote users	61
E91	Initialize processing, such as batch job, on-line, or off-line	61
E79	reports	58
G176	Review communications-computer systems software release or patch documentation	57
F152	Perform recovery procedures on communications-computer systems	57
F147	Perform communications-computer systems startup or shutdown procedures	57
G173	Resize database areas	55
O335	Determine causes of abnormal program halts	55
G177	Review disk directories	55
F134	Load operating systems	55
E109	Review customer requests for communications-computer systems services	54
E100	Monitor operational status of equipment	54
O332	Coordinate new system releases with users	54
F130	Isolate problems on production runs	53
E108	Review computer output products	53
G161	Align files on disks	52
F126	Interpret indicating lights on peripheral equipment	52
F156	Respond to system requests	52
E77	Analyze computer-performance measurement data	50
F113	Adjust run sequence	48
F145	Participate with programmers in testing or debugging programs	48
O330	Assign file or disk space to users or projects	48
E84	Distribute messages or output products	48
F121	Correct stoppages on communications-computer systems peripheral equipment	47
Q429	Assign user identifications (IDs) or passwords	47

TABLE A9

DATABASE MANAGER JOB
(STG355)

TASKS		PERCENT MEMBERS PERFORMING (N=111)
E80	Assist users in resolving computer software malfunctions or problems	99
F114	Analyze console displays or system printouts	91
E106	Respond to inquiries from customers, such as computer job or message status	88
E91	Initialize processing, such as batch job, on-line, or off-line	88
F120	Coordinate scheduled downtime with main site, office of primary responsibility (OPR), and remote users	86
F130	Isolate problems on production runs	85
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	85
G173	Resize database areas	84
F155	Request system information via consoles	83
F113	Adjust run sequence	83
F160	Transfer programs or data from one media to another media	83
G176	Review communications-computer systems software release or patch documentation	81
E83	Coordinate with subscribers or customers on operational or procedural matters	80
E108	Review computer output products	80
G175	Review communications-computer systems run processing instructions	79
G172	Prepare communications-computer systems run processing instructions	76
G170	Establish or update computer run processing instructions	76
G161	Align files on disks	72
O332	Coordinate new system releases with users	72
F137	Monitor data flow	72
F156	Respond to system requests	72
E84	Distribute messages or output products	72
E79	Assist customers in preparation of difficulty or trouble reports	72
F129	Isolate causes of machine stops or malfunctions	71
F152	Perform recovery procedures on communications-computer systems	70
E102	Notify customers of completed output products	70
O330	Assign file or disk space to users or projects	66
O335	Determine causes of abnormal program halts	65
E105	Process output products	65
A3	Determine or establish work priorities	64
F141	Mount or dismount magnetic media	64
F147	Perform communications-computer systems startup or shutdown procedures	64
E109	Review customer requests for communications-computer systems services	63
G177	Review disk directories	63

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TABLE A10

NETWORK ADMINISTRATION JOB
(STG397)

TASKS		PERCENT MEMBERS PERFORMING (N=52)
E80	Assist users in resolving computer software malfunctions or problems	94
F129	Isolate causes of machine stops or malfunctions	88
O335	Determine causes of abnormal program halts	88
E100	Monitor operational status of equipment	84
N288	Analyze communications-computer systems processing capabilities	84
F160	Transfer programs or data from one media to another media	84
F116	Change systems hardware configurations	82
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	82
F147	Perform communications-computer systems startup or shutdown procedures	81
N289	Analyze database requirements	80
A6	Develop work methods or procedures	80
P424	Test computer programs	78
F145	Participate with programmers in testing or debugging programs	78
O332	Coordinate new system releases with users	78
F146	Perform communications-computer systems equipment power-on or power-off procedures	78
O330	Assign file or disk space to users or projects	78
Q429	Assign user identifications (IDs) or passwords	76
F121	Correct stoppages on communications-computer systems peripheral equipment	76
G177	Review disk directories	76
F134	Load operating systems	76
A3	Determine or establish work priorities	76
E83	Coordinate with subscribers or customers on operational or procedural matters	75
F114	Analyze console displays or system printouts	75
N297	Determine interrelationships among files, documents, or data items	75
F115	Change internal components of microcomputers, such as personal computer (PC) modulator-demodulators (MODEMs)	73
E82	Compile statistical data, such as system availability, user logons, or traffic data	73
O391	Train users in communications-computer systems	71
F155	Request system information via consoles	71
E79	Assist customers in preparation of difficulty or trouble reports	71
N293	Determine communications-computer systems data security requirements	71
G161	Align files on disks	71
F123	Format magnetic media	71
N290	Brief functional area personnel on capabilities of proposed communications-computer systems equipment	71

TABLE A11

TAPE LIBRARIAN JOB
(STG388)

TASKS		PERCENT MEMBERS PERFORMING (N=53)
K225	Certify magnetic media	90
K233	File magnetic media	88
K226	Clean magnetic media	86
K239	Place load-point or end-of-tape markers on magnetic tapes	84
K229	Degauss magnetic media	83
K234	File returned magnetic media	79
E90	Identify tape failures	79
F141	Mount or dismount magnetic media	79
F131	Label magnetic media	79
K235	Inventory magnetic media	79
E89	Identify magnetic media needed from or to be returned to off-site storage	75
K236	Issue magnetic media from library	73
K244	Update scratch tapes or disk pack lists	71
K245	Visually inspect magnetic media	71
K237	Maintain off-site or remote storage backup files	66
K227	Compare internal and external labels	66
K230	Destroy magnetic media	64
F148	Perform magnetic media searches	62
K231	Establish or update magnetic media accountability records	60
F117	Check out magnetic media from libraries	56
K238	Make entries on magnetic media control logs	56
Q436	Escort visitors through facilities	56
K228	Coordinate magnetic media requirements with system console operators or system monitors	52
E104	Prepare unclassified media for mail, delivery, or distribution	50
E84	Distribute messages or output products	49
E91	Initialize processing, such as batch job, on-line, or off-line	49
E99	Make entries on shift supervisor logs or master station logs (MSLs)	45
F123	Format magnetic media	41
E100	Monitor operational status of equipment	35
F156	Respond to system requests	35

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TABLE A12

ENTRY LEVEL OPERATOR CLUSTER
(STG129)

TASKS		PERCENT MEMBERS PERFORMING (N=57)
F141	Mount or dismount magnetic media	85
E100	Monitor operational status of equipment	70
F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes	68
F131	Label magnetic media	66
F147	Perform communications-computer systems startup or shutdown procedures	65
F156	Respond to system requests	64
F146	Perform communications-computer systems equipment power-on or power-off procedures	59
E99	Make entries on shift supervisor logs or master station logs (MSLs)	52
E91	Initialize processing, such as batch job, on-line, or off-line	49
F155	Request system information via consoles	38
F126	Interpret indicating lights on peripheral equipment	38
E84	Distribute messages or output products	38
G164	Burst or decollate printed output products	36
E105	Process output products	36
F135	Maintain operations of peripheral equipment	36
R492	Prepare AF Forms 597 (ADPE Maintenance Record) or vendor invoice certificates	36
Q436	Escort visitors through facilities	35
F149	Perform operator maintenance on communications-computer systems equipment	33
E106	Respond to inquiries from customers, such as computer job or message status	33
F114	Analyze console displays or system printouts	29
F136	Make entries on work or run requests, such as initials, remarks, or panel readings	29
F137	Monitor data flow	24
F117	Check out magnetic media from libraries	22

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TABLE A13

SECURITY CLUSTER
(STG161)

TASKS		PERCENT MEMBERS PERFORMING (N=254)
Q433	Destroy or dispose of classified or sensitive unclassified materials	90
Q468	Store or safeguard classified materials	88
Q470	Witness destruction of classified materials	87
Q441	Inventory classified or communications security (COMSEC) materials	79
Q469	Verify access to restricted or controlled areas or classified materials	76
Q430	Change lock combinations for safes, vaults, or cipher locks	76
Q452	Prepare destruction reports for classified materials	75
Q443	Maintain COMSEC account records	74
Q447	Page count classified materials	74
Q461	Report security violations	73
Q467	Sign receipts for classified materials	73
Q436	Escort visitors through facilities	72
Q440	Inspect classified materials	72
Q442	Issue COMSEC materials	71
Q445	Maintain visitor registers	71
Q435	Distribute classified materials	70
Q432	Designate classified materials for destruction	68
Q431	Conduct security briefings or debriefings	65
Q449	Perform courier functions	65
Q444	Maintain COMSEC emergency action plans (EAPs)	65
Q446	Mark or stamp sensitive unclassified or classified information, other than messages	63
Q448	Perform administrative security inspections	61
Q434	Determine protection requirements for classified materials	61
A3	Determine or establish work priorities	60
Q453	Prepare incident reports	60
Q450	Perform physical security inspections of facilities	57
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	55
B26	Implement safety or security programs	55
Q459	Prepare or update access lists to restricted or controlled areas or classified materials	54
C44	Evaluate security programs	52
A11	Plan briefings	50
Q437	Establish or update classified materials files	49

A13

TABLE A14

COMMUNICATIONS SECURITY JOB
(STG483)

TASKS		PERCENT MEMBERS PERFORMING (N=186)
Q470	Witness destruction of classified materials	98
Q441	Inventory classified or communications security (COMSEC) materials	97
Q433	Destroy or dispose of classified or sensitive unclassified materials	96
Q468	Store or safeguard classified materials	96
Q443	Maintain COMSEC account records	94
Q447	Page count classified materials	94
Q452	Prepare destruction reports for classified materials	93
Q442	Issue COMSEC materials	92
Q445	Maintain visitor registers	89
Q430	Change lock combinations for safes, vaults, or cipher locks	88
Q436	Escort visitors through facilities	87
Q435	Distribute classified materials	86
Q469	Verify access to restricted or controlled areas or classified materials	85
Q444	Maintain COMSEC emergency action plans (EAPs)	83
Q440	Inspect classified materials	81
Q467	Sign receipts for classified materials	81
Q432	Designate classified materials for destruction	80
Q446	Mark or stamp sensitive unclassified or classified information, other than messages	76
Q449	Perform courier functions	75
Q461	Report security violations	75
Q434	Determine protection requirements for classified materials	68
Q453	Prepare incident reports	65
Q431	Conduct security briefings or debriefings	63
Q459	Prepare or update access lists to restricted or controlled areas or classified materials	62
A3	Determine or establish work priorities	62
Q437	Establish or update classified materials files	61
Q448	Perform administrative security inspections	58
Q450	Perform physical security inspections of facilities	56
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	54
A6	Develop work methods or procedures	47
C44	Evaluate security programs	46
Q462	Review classified materials destruction plans	46
Q463	Review documents for security violations	46

TABLE A15

SECURITY NCOIC
(STG301)

TASKS		PERCENT MEMBERS PERFORMING (N=41)
Q470	Witness destruction of classified materials	98
Q441	Inventory classified or communications security (COMSEC) materials	97
Q433	Destroy or dispose of classified or sensitive unclassified materials	96
Q468	Store or safeguard classified materials	96
Q443	Maintain COMSEC account records	94
Q447	Page count classified materials	94
Q452	Prepare destruction reports for classified materials	93
Q442	Issue COMSEC materials	92
Q445	Maintain visitor registers	89
Q430	Change lock combinations for safes, vaults, or cipher locks	88
Q436	Escort visitors through facilities	87
Q435	Distribute classified materials	86
Q469	Verify access to restricted or controlled areas or classified materials	85
Q444	Maintain COMSEC emergency action plans (EAPs)	83
Q440	Inspect classified materials	81
Q467	Sign receipts for classified materials	81
Q432	Designate classified materials for destruction	80
Q446	Mark or stamp sensitive unclassified or classified information, other than messages	76
Q449	Perform courier functions	75
Q461	Report security violations	75
Q434	Determine protection requirements for classified materials	68
Q453	Prepare incident reports	65
Q431	Conduct security briefings or debriefings	63
Q459	Prepare or update access lists to restricted or controlled areas or classified materials	62
A3	Determine or establish work priorities	62
Q437	Establish or update classified materials files	61
Q448	Perform administrative security inspections	58
Q450	Perform physical security inspections of facilities	56
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	54
A6	Develop work methods or procedures	47
C44	Evaluate security programs	46
Q462	Review classified materials destruction plans	46
Q463	Review documents for security violations	46

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TABLE A16

SUPERVISION CLUSTER
(STG55)

TASKS		PERCENT MEMBERS PERFORMING (N=330)
B20	Counsel personnel on personal or military-related matters	88
C52	Write EPRs	85
A3	Determine or establish work priorities	84
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	80
C42	Evaluate personnel for compliance with performance standards	79
A6	Develop work methods or procedures	79
B29	Interpret policies, directives, or procedures for subordinates	78
C53	Write recommendations for awards or decorations	77
A16	Schedule leaves or passes	75
A9	Establish performance standards for subordinates	72
A4	Determine requirements for space, personnel, equipment or supplies	72
A13	Plan or schedule work assignments	71
B33	Supervise Communications-Computer Systems Operators (AFSC 49151)	66
A1	Assign personnel to duty positions	63
C36	Analyze workload requirements	60
C43	Evaluate personnel for demotion, reclassification, or special awards	59
C47	Evaluate work schedules	56
E80	Assist users in resolving computer software malfunctions or problems	56
A17	Write job descriptions	54
C41	Evaluate maintenance or use of workspace, equipment, or supplies	53
A11	Plan briefings	53
D61	Counsel trainees on training progress	52
E83	Coordinate with subscribers or customers on operational or procedural matters	51
C40	Evaluate job or position descriptions	50
E88	Evaluate quality of customer service	50
B23	Direct utilization of equipment	50
D68	Evaluate progress of trainees	48
D70	Maintain training records, charts, or graphs	48
D58	Conduct OJT	48
Q436	Escort visitors through facilities	47
B19	Conduct staff meetings	46
C39	Evaluate inspection reports or procedures	46
B34	Supervise Communications-Computer Systems Supervisors (AFSC 49171)	46
B26	Implement safety or security programs	40
C48	Indorse enlisted performance reports (EPRs)	40
E100	Monitor operational status of equipment	38
B32	Supervise civilians	34
B35	Supervise military personnel with AFSCs other than AFSC 491X1	33

TABLE A17

SHIFT SUPERVISOR
(STG475)

TASKS		PERCENT MEMBERS PERFORMING (N=164)
B20	Counsel personnel on personal or military-related matters	98
C52	Write EPRs	96
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	95
B29	Interpret policies, directives, or procedures for subordinates	93
A3	Determine or establish work priorities	93
C53	Write recommendations for awards or decorations	93
A9	Establish performance standards for subordinates	92
C42	Evaluate personnel for compliance with performance standards	91
A4	Determine requirements for space, personnel, equipment or supplies	91
A16	Schedule leaves or passes	89
A6	Develop work methods or procedures	88
A13	Plan or schedule work assignments	82
A1	Assign personnel to duty positions	82
C43	Evaluate personnel for demotion, reclassification, or special awards	76
A2	Assign sponsors for incoming personnel	76
A17	Write job descriptions	76
B33	Supervise Communications-Computer Systems Operators (AFSC 49151)	75
C47	Evaluate work schedules	74
C36	Analyze workload requirements	73
C41	Evaluate maintenance or use of workspace, equipment, or supplies	73
B34	Supervise Communications-Computer Systems Supervisors (AFSC 49171)	73
C40	Evaluate job or position descriptions	72
C39	Evaluate inspection reports or procedures	67
B23	Direct utilization of equipment	65
A11	Plan briefings	63
E88	Evaluate quality of customer service	62
B28	Initiate personnel action requests	62
E83	Coordinate with subscribers or customers on operational or procedural matters	62
D70	Maintain training records, charts, or graphs	62
D56	Assign on-the-job training (OJT) trainers	61
B22	Direct maintenance of administrative files	61
C48	Indorse enlisted performance reports (EPRs)	60
B19	Conduct staff meetings	60
D61	Counsel trainees on training progress	60

TABLE A18

RESOURCE MANAGER
(STG360)

TASKS		PERCENT MEMBERS PERFORMING (N=9)
A6	Develop work methods or procedures	100
A3	Determine or establish work priorities	100
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	100
A13	Plan or schedule work assignments	88
A4	Determine requirements for space, personnel, equipment or supplies	66
C36	Analyze workload requirements	66
A9	Establish performance standards for subordinates	66
A7	Draft budget requirements	66
A12	Plan layouts of facilities	66
A5	Develop organizational charts	66
B20	Counsel personnel on personal or military-related matters	55
A1	Assign personnel to duty positions	55
A16	Schedule leaves or passes	55
B33	Supervise Communications-Computer Systems Operators (AFSC 49151)	55
C37	Evaluate budget requirements	44
B23	Direct utilization of equipment	44
C41	Evaluate maintenance or use of workspace, equipment, or supplies	44
A11	Plan briefings	44
B19	Conduct staff meetings	44
A10	Establish publication libraries	44
A2	Assign sponsors for incoming personnel	44
B21	Direct development or maintenance of status boards, graphs, or charts	44
D60	Conduct training conferences or briefings	33
A15	Review communications plans	33
B29	Interpret policies, directives, or procedures for subordinates	33
B26	Implement safety or security programs	33
A17	Write job descriptions	33
C38	Evaluate fraud, waste, and abuse prevention programs	33
A14	Plan safety or security programs	33
E80	Assist users in resolving computer software malfunctions or problems	33

TABLE A19

TRAINING CLUSTER
(STG182)

TASKS		PERCENT MEMBERS PERFORMING (N=19)
D65	Develop training aids	89
D64	Develop lesson plans	84
D69	Evaluate training methods or techniques	73
D70	Maintain training records, charts, or graphs	73
D68	Evaluate progress of trainees	68
D60	Conduct training conferences or briefings	63
D55	Administer or score tests	57
D58	Conduct OJT	57
D61	Counsel trainees on training progress	57
D62	Determine training requirements, such as OJT or resident course training	57
D63	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	57
D66	Direct or implement training programs	57
D72	Procure training aids, space, or equipment	57
A3	Determine or establish work priorities	52
D74	Write test questions	52
D59	Conduct resident course classroom training	47
D67	Establish study reference files	47
D71	Plan or schedule OJT	47
D73	Select or schedule individuals for specialized training	47
D75	Write training reports	42
Q436	Escort visitors through facilities	42
A11	Plan briefings	36
A6	Develop work methods or procedures	31
A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	31
B20	Counsel personnel on personal or military-related matters	31
C42	Evaluate personnel for compliance with performance standards	31

TABLE A20

TEST AND EVALUATION JOB
(STG385)

TASKS		PERCENT MEMBERS PERFORMING (N=7)
P416	Run integration tests on communications-computer systems	100
P417	Run interface type tests on communications-computer systems	100
P422	Run validation or verification tests on communications-computer systems	100
P399	Determine impact of releases or changes to system databases	86
P397	Determine impact of communications-computer applications systems errors	85
P410	Prepare communications-computer systems input test data	85
P411	Review communications-computer systems input test data	85
P420	Run subsystems tests on communications-computer systems	85
P421	Run total systems tests on communications-computer systems	85
P424	Test computer programs	85
P425	Track status of software discrepancies	85
F145	Participate with programmers in testing or debugging programs	71
O335	Determine causes of abnormal program halts	71
P396	Analyze communications-computer system test results	71
P398	Determine impact of operating systems errors	71
P403	Evaluate communications-computer systems test plans	71
P409	Perform database conversions	71
P419	Run regression tests on communications-computer systems	71
E80	Assist users in resolving computer software malfunctions or problems	71
F157	Review input data	57
G176	Review communications-computer systems software release or patch documentation	57
N317	Prepare plans to test software interface	57
O336	Determine currency or accuracy of data bases	57
O354	Identify database deficiencies	57
O364	Prepare communications-computer systems software test analysis reports	57
O374	Review computer operation manuals	57
O378	Review database recovery procedures	57
O385	Review software problem reports	57
P412	Review communications-computer systems test plans	57
P413	Review communications-computer systems test reports	57
P418	Run parallel type tests on communications-computer systems	57

TABLE A21

SUPPLY CLUSTER
(STG58)

TASKS		PERCENT MEMBERS PERFORMING (N=96)
R485	Inventory tools, supplies, or equipment	70
R478	Dispose of excess or unserviceable tools, supplies, or equipment	66
R489	Maintain equipment custodian accounts	66
R496	Research status of purchase orders	65
R490	Monitor compliance with contracts	62
R481	Establish or maintain hand receipt files	60
R471	Administer delivery of open purchase orders	56
R476	Confirm contract terms, such as delivery date or quantity	56
R491	Place tools, supplies, or equipment in storage	56
R494	Prepare procurement documents, such as purchase requests	53
R480	Distribute purchasing information to vendors or customers	52
R484	Inspect tools, supplies, or equipment	52
A3	Determine or establish work priorities	51
R486	Issue tools, supplies, or equipment	51
R487	Load or unload tools, supplies, or equipment	51
R479	Distribute purchase orders	50
R482	Establish or update inventory or stock control records	50
R473	Close out open purchase contract orders	47
A6	Develop work methods or procedures	44
R495	Prepare supply documents, such as requisitions, invoices, or vouchers	42
E80	Assist users in resolving computer software malfunctions or problems	41
R483	Establish procedures for equipment maintenance or other contractual support services	40
R497	Review communications-computer systems excess or availability bulletins	40
E107	Review communications-computer systems requirement documentation (CSRD)	39
A4	Determine requirements for space, personnel, equipment or supplies	38
R477	Determine requirements for modifications or amendments to contracts	38
R499	Review procurement documents	36
R488	Maintain base-level purchase account records, such as local purchase	36
R492	Prepare AF Forms 597 (ADPE Maintenance Record) or vendor invoice certificates	31

A21

TABLE A22

CONTRACT MANAGER
(STG370)

TASKS		PERCENT MEMBERS PERFORMING (N=47)
R496	Research status of purchase orders	89
R478	Dispose of excess or unserviceable tools, supplies, or equipment	87
R490	Monitor compliance with contracts	85
R471	Administer delivery of open purchase orders	80
R485	Inventory tools, supplies, or equipment	80
R487	Load or unload tools, supplies, or equipment	76
R489	Maintain equipment custodian accounts	76
R473	Close out open purchase contract orders	74
R476	Confirm contract terms, such as delivery date or quantity	74
R480	Distribute purchasing information to vendors or customers	74
R479	Distribute purchase orders	72
R481	Establish or maintain hand receipt files	72
R491	Place tools, supplies, or equipment in storage	72
R494	Prepare procurement documents, such as purchase requests	72
R484	Inspect tools, supplies, or equipment	70
R486	Issue tools, supplies, or equipment	68
R495	Prepare supply documents, such as requisitions, invoices, or vouchers	65
R482	Establish or update inventory or stock control records	63
R483	Establish procedures for equipment maintenance or other contractual support services	63
A3	Determine or establish work priorities	61
A6	Develop work methods or procedures	59
R497	Review communications-computer systems excess or availability bulletins	59
R477	Determine requirements for modifications or amendments to contracts	57
R499	Review procurement documents	57
R488	Maintain base-level purchase account records, such as local purchase	55
A4	Determine requirements for space, personnel, equipment or supplies	53
E107	Review communications-computer systems requirement documentation (CSRD)	48
R493	Prepare or process output media for salvage or recycling	42
R500	Verify validity of supply requests	42
C41	Evaluate maintenance or use of workspace, equipment, or supplies	40
R474	Complete credit or damage claims	40
B23	Direct utilization of equipment	38
R472	Cancel supply requisitions	38
R492	Prepare AF Forms 597 (ADPE Maintenance Record) or vendor invoice certificates	38
E80	Assist users in resolving computer software malfunctions or problems	36
E109	Review customer requests for communications-computer systems services	31

TABLE A23

SUPPLY JOB
(STG328)

TASKS		PERCENT MEMBERS PERFORMING (N=10)
R485	Inventory tools, supplies, or equipment	100
R478	Dispose of excess or unserviceable tools, supplies, or equipment	70
R484	Inspect tools, supplies, or equipment	70
R489	Maintain equipment custodian accounts	70
R491	Place tools, supplies, or equipment in storage	70
R482	Establish or update inventory or stock control records	50
R486	Issue tools, supplies, or equipment	50
R487	Load or unload tools, supplies, or equipment	40
R492	Prepare AF Forms 597 (ADPE Maintenance Record) or vendor invoice certificates	40
R493	Prepare or process output media for salvage or recycling	30
R497	Review communications-computer systems excess or availability bulletins	30
B21	Direct development or maintenance of status boards, graphs, or charts	20
R471	Administer delivery of open purchase orders	20
R476	Confirm contract terms, such as delivery date or quantity	20
R490	Monitor compliance with contracts	20

TABLE A24

SWITCHBOARD OPERATIONS JOB
(STG171)

TASKS		PERCENT MEMBERS PERFORMING (N=44)
M280	Place calls between subscribers, other than special handling calls	93
M282	Process telephone conference calls	93
M268	Connect calls according to their precedence	88
M269	Coordinate switchboard circuit or equipment problems with maintenance, technical control, or support agencies	81
M281	Place special handling calls	79
M277	Monitor high precedence or emergency calls	72
M287	Test switchboard circuits	61
M274	Maintain status boards on location of commanders	52
M284	Reroute calls due to circuit failures	52
M263	Authenticate calls	50
Q436	Escort visitors through facilities	50
D58	Conduct OJT	43
M276	Maintain telephone directories	40
M285	Respond to supervisory lights	38
E99	Make entries on shift supervisor logs or master station logs (MSLs)	36
M275	Maintain switchboard instructions for emergencies, such as fire, crash, or attack	36
M266	Compile telephone directories	31
M264	Book calls	29
M271	Maintain accounts for telephone customers or toll services	29
M286	Supervise minimize condition actions	29
M272	Maintain logs of control numbers used by customers placing precedence calls	25
M278	Operate voice recorders	25
M283	Report call progress information	25
Q441	Inventory classified or communications security (COMSEC) materials	25

APPENDIX B

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0001   ST0298 - Mainframe Console Operations

1	E91	Initialize processing, such as batch job, on-line, or off-line
2	E99	Make entries on shift supervisor logs or master station logs (MSLs)
3	E100	Monitor operational status of equipment
4	F114	Analyze console displays or system printouts
5	F121	Correct stoppages on communications-computer systems peripheral equipment
6	F126	Interpret indicating lights on peripheral equipment
7	F129	Isolate causes of machine stops or malfunctions
8	F131	Label magnetic media
9	F135	Maintain operations of peripheral equipment
10	F141	Mount or dismount magnetic media
11	F143	Notify affected personnel, such as supervisors or remote users, of machine failures or downtimes
12	F146	Perform communications-computer systems equipment power-on or power-off procedures
13	F147	Perform communications-computer systems startup or shutdown procedures
14	F149	Perform operator maintenance on communications-computer systems equipment
15	F151	Perform or practice communications-computer systems emergency procedures
16	F152	Perform recovery procedures on communications-computer systems
17	F155	Request system information via consoles
18	F156	Respond to system requests

0002   ST0287 - Product Control and Distribution

1	E84	Distribute messages or output products
2	E102	Notify customers of completed output products
3	E104	Prepare unclassified media for mail, delivery, or distribution
4	E105	Process output products
5	E106	Respond to inquiries from customers, such as computer job or message status
6	E108	Review computer output products

0003   ST0224 - Initial Program Loading

1	F123	Format magnetic media
2	F134	Load operating systems
3	F148	Perform magnetic media searches
4	F158	Set or reset computer time clocks
5	F160	Transfer programs or data from one media to another media

0004   ST0196 - Data Flow Monitoring

1	F127	Interpret indicating or register lights on central processing units (CPUs) or mainframes
2	F136	Make entries on work or run requests, such as initials,remarks, or panel readings
3	F137	Monitor data flow
4	F150	Perform operator maintenance on temperature or humidity recording devices

0005 ST0390 - Message Processing

1	E101	Notify addressees or distribution centers of high precedence message receipt
2	I186	Annotate station serial number on messages
3	I187	Annotate time of transmission or receipt on messages
4	I188	Assign operating signals
5	I189	Assign routing indicators
6	I193	Follow special instructions on messages
7	I194	Follow up service messages
8	I196	Inspect message form for releasing authority, classification, precedence, date-time group, or special instructions
9	I199	Maintain service message logs or files
10	I200	Make entries on DD Forms 1503 (Message Correction Notice)
11	I201	Perform alternate routing of message traffic
12	I202	Prepare abbreviated plaindress messages
13	I206	Prepare service actions on messages, such as misrouted, garbled, incomplete, or interlaced
14	I211	Respond to service messages
15	I212	Retrieve messages manually
16	I213	Separate incoming messages for distribution
17	I214	Stamp messages with special handling, precedence, or classification

0006 ST0215 - Mainframe Operator Tape Responsibilities

1	E89	Identify magnetic media needed from or to be returned to off-site storage
2	E90	Identify tape failures
3	F117	Check out magnetic media from libraries
4	F118	Compare internal and external labels against run sheets
5	F119	Coordinate magnetic media requirements with magnetic media librarians

0007 ST0265 - Tape Library

1	K225	Certify magnetic media
2	K226	Clean magnetic media
3	K227	Compare internal and external labels
4	K228	Coordinate magnetic media requirements with system console operators or system monitors
5	K229	Degauss magnetic media
6	K230	Destroy magnetic media
7	K231	Establish or update magnetic media accountability records
8	K232	Establish or update magnetic media history files
9	K233	File magnetic media
10	K234	File returned magnetic media
11	K235	Inventory magnetic media
12	K236	Issue magnetic media from library
13	K237	Maintain off-site or remote storage backup files
14	K238	Make entries on magnetic media control logs
15	K239	Place load-point or end-of-tape markers on magnetic tapes
16	K244	Update scratch tapes or disk pack lists

17   K245   Visually inspect magnetic media

0008   ST0141 - Customer Service

1   E76   Analyze circuit, communications line, or equipment outage reports
2   E77   Analyze computer-performance measurement data
3   E78   Analyze statistical data
4   E79   Assist customers in preparation of difficulty or trouble reports
5   E80   Assist users in resolving computer software malfunctions or problems
6   E82   Compile statistical data, such as system availability, user logons, or traffic data
7   E83   Coordinate with subscribers or customers on operational or procedural matters

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0009   ST0201 - AF Message Processing Exchange

1   H181   Make entries on intercept logs
2   H183   Place switching circuits into or out-of-service
3   I191   Direct messages to intercept
4   I195   Initiate system dry-ups

0010   ST0234 - COMSEC Accounts

1   Q430   Change lock combinations for safes, vaults, or cipher locks
2   Q432   Designate classified materials for destruction
3   Q433   Destroy or dispose of classified or sensitive unclassified materials
4   Q434   Determine protection requirements for classified materials
5   Q435   Distribute classified materials
6   Q436   Escort visitors through facilities
7   Q437   Establish or update classified materials files
8   Q439   Implement cryptographic key changes
9   Q440   Inspect classified materials
10   Q441   Inventory classified or communications security (COMSEC) materials
11   Q442   Issue COMSEC materials
12   Q443   Maintain COMSEC account records
13   Q444   Maintain COMSEC emergency action plans (EAPs)
14   Q445   Maintain visitor registers
15   Q446   Mark or stamp sensitive unclassified or classified information, other than messages
16   Q447   Page count classified materials
17   Q449   Perform courier functions
18   Q450   Perform physical security inspections of facilities
19   Q452   Prepare destruction reports for classified materials
20   Q461   Report security violations
21   Q467   Sign receipts for classified materials
22   Q468   Store or safeguard classified materials
23   Q469   Verify access to restricted or controlled areas or classified materials
24   Q470   Witness destruction of classified materials

0011   ST0160 - Security Supervision Practices

1	Q453	Prepare incident reports
2	Q457	Prepare or revise classified materials destruction plans
3	Q458	Prepare or revise security procedures checklists
4	Q459	Prepare or update access lists to restricted or controlled areas or classified materials
5	Q462	Review classified materials destruction plans
6	Q463	Review documents for security violations
7	Q464	Review documents or other materials to determine security disposition
8	Q465	Sanitize sites or equipment upon completion of classified processing
9	Q466	Secure site or equipment for classified processing

0012   ST0178 - Safety/Security

1	A11	Plan briefings
2	A14	Plan safety or security programs
3	B26	Implement safety or security programs
4	C39	Evaluate inspection reports or procedures
5	C44	Evaluate security programs
6	C54	Write staff studies, surveys, or special reports, other than training reports
7	Q431	Conduct security briefings or debriefings
8	Q448	Perform administrative security inspections

0013   ST0210 - First Line Supervision

1	A3	Determine or establish work priorities
2	A6	Develop work methods or procedures
3	A8	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)
4	A9	Establish performance standards for subordinates
5	A13	Plan or schedule work assignments
6	A16	Schedule leaves or passes
7	B20	Counsel personnel on personal or military-related matters
8	B29	Interpret policies, directives, or procedures for subordinates
9	B33	Supervise Communications-Computer Systems Operators (AFSC 49151)
10	C42	Evaluate personnel for compliance with performance standards
11	C43	Evaluate personnel for demotion, reclassification, or special awards
12	C47	Evaluate work schedules
13	C52	Write EPRs
14	C53	Write recommendations for awards or decorations
15	D56	Assign on-the-job training (OJT) trainers
16	D61	Counsel trainees on training progress
17	D62	Determine training requirements, such as OJT or resident course training
18	D66	Direct or implement training programs
19	D68	Evaluate progress of trainees
20	D69	Evaluate training methods or techniques
21	D70	Maintain training records, charts, or graphs

22   D71   Plan or schedule OJT

0014   ST0267 - Resource Management

1   A4   Determine requirements for space, personnel, equipment or supplies
2   B23   Direct utilization of equipment
3   C36   Analyze workload requirements
4   C41   Evaluate maintenance or use of workspace, equipment, or supplies

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0015   ST0142 - Program Management

1   A1   Assign personnel to duty positions
2   A2   Assign sponsors for incoming personnel
3   A5   Develop organizational charts
4   A7   Draft budget requirements
5   A12   Plan layouts of facilities
6   A15   Review communications plans
7   A17   Write job descriptions
8   A18   Write or update unit emergency plans
9   B19   Conduct staff meetings
10   B28   Initiate personnel action requests
11   B30   Maintain contingency plans
12   B34   Supervise Communications-Computer Systems Supervisors (AFSC 49171)
13   C37   Evaluate budget requirements
14   C40   Evaluate job or position descriptions
15   C46   Evaluate unit emergency plans
16   C48   Indorse enlisted performance reports (EPRs)

0016   ST0225 - Resource Protection

1   B24   Implement cost-reduction programs
2   B25   Implement fraud, waste, and abuse prevention programs
3   B27   Implement suggestion programs
4   C38   Evaluate fraud, waste, and abuse prevention programs

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0017   ST0154 - Training Development

1   D60   Conduct training conferences or briefings
2   D64   Develop lesson plans
3   D65   Develop training aids
4   D72   Procure training aids, space, or equipment
5   D73   Select or schedule individuals for specialized training

0018   ST0138 - Instruction

1 D55   Administer or score tests
2 D63   Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)
3 D67   Establish study reference files
4 D74   Write test questions
5 D75   Write training reports

0019   ST0200 - Message Routing

1 J217   Maintain address indicator group (AIG) files
2 J218   Maintain alternate routing plans
3 J219   Maintain general message files
4 J220   Maintain message distribution (MD) tables
5 J221   Maintain plain language address (PLA) tables
6 J223   Review messages for accuracy or proper handling
7 J224   Review traffic logs or files

0020   ST0173 - Teletype Operations

1 I192   Encrypt or decrypt messages using cryptographic devices
2 I203   Prepare headers and trailers for data messages
3 I204   Prepare messages for encryption or decryption
4 I208   Proofread teletype written copies, headers, or trailers

0021   ST0415 - Tactical Communication Operations

1   L246   Camouflage mobile communications equipment
2   L248   Erect tactical air base cantonment areas
3   L249   Maintain mobile administrative support kits
4   L250   Palletize equipment
5   L251   Perform guard duties
6   L252   Perform initial tests of systems in a mobile environment
7   L253   Perform mobile communications control center operations
8   L255   Perform operational checks of mobile communications equipment, other than convoy equipment
9   L256   Perform operations checks or services on vehicles
10 L257   Prepare communications-computer supplies for field operations
11 L258   Prepare communications-computer systems equipment for operation
12 L259   Process calls through mobile telephone equipment
13 L260   Secure communications-computer systems equipment in vans for movement
14 L261   Set up or dismantle mobile communications-computer systems equipment

0022   ST0277 - ADPE Inventory

1	R478	Dispose of excess or unserviceable tools, supplies, or equipment
2	R481	Establish or maintain hand receipt files
3	R482	Establish or update inventory or stock control records
4	R484	Inspect tools, supplies, or equipment
5	R485	Inventory tools, supplies, or equipment
6	R486	Issue tools, supplies, or equipment
7	R487	Load or unload tools, supplies, or equipment
8	R489	Maintain equipment custodian accounts
9	R491	Place tools, supplies, or equipment in storage

0023   ST0156 - ADPE/Contract Custodian

1	R471	Administer delivery of open purchase orders
2	R472	Cancel supply requisitions
3	R473	Close out open purchase contract orders
4	R476	Confirm contract terms, such as delivery date or quantity
5	R477	Determine requirements for modifications or amendments to contracts
6	R479	Distribute purchase orders
7	R480	Distribute purchasing information to vendors or customers
8	R483	Establish procedures for equipment maintenance or other contractual support services
9	R488	Maintain base-level purchase account records, such as local purchase
10	R490	Monitor compliance with contracts
11	R494	Prepare procurement documents, such as purchase requests
12	R495	Prepare supply documents, such as requisitions, invoices, or vouchers
13	R496	Research status of purchase orders
14	R497	Review communications-computer systems excess or availability bulletins
15	R499	Review procurement documents
16	R500	Verify validity of supply requests

0024   ST0140 - System Scheduling

1	F113	Adjust run sequence
2	F120	Coordinate scheduled downtime with main site, office of primary responsibility (OPR), and remote users
3	F122	Dump main storage contents
4	F130	Isolate problems on production runs
5	F157	Review input data

0025   ST0322 - System Monitoring

1	G167	Distribute computer run schedules
2	G170	Establish or update computer run processing instructions
3	G172	Prepare communications-computer systems run processing instructions
4	G173	Resize database areas
5	G174	Review communications-computer systems production schedules

6 G175 Review communications-computer systems run processing instructions
7 G176 Review communications-computer systems software release or patch documentation

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0026   ST0164 - Error Analysis

1 P397 Determine impact of communications-computer applications systems errors
2 P398 Determine impact of operating systems errors
3 P399 Determine impact of releases or changes to system databases
4 P402 Evaluate changes to computer nets or networks
5 P405 Identify hardware configuration performance deficiency trends

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0027   ST0170 - Database Administration

1 O330 Assign file or disk space to users or projects
2 O332 Coordinate new system releases with users
3 O335 Determine causes of abnormal program halts
4 O352 Explain communications-computer systems error printouts to customers
5 O356 Interpret output data or products for users
6 O357 Inventory software release packages

0028   ST0168 - Database Management

1 O336 Determine currency or accuracy of data bases
2 O337 Develop database recovery procedures
3 O338 Develop database retrieval procedures
4 O339 Develop database update procedures
5 O354 Identify database deficiencies
6 O372 Review changes to database
7 O378 Review database recovery procedures
8 O379 Review database retrieval procedures
9 O380 Review database update procedures
10 O384 Review software implementation or conversion plans
11 O385 Review software problem reports
12 P409 Perform database conversions

0029   ST0194 - Run Stream Setup

1 O331 Code job control run streams in job control languages
2 O358 Maintain file space listings or catalogs
3 O389 Track job streams
4 O394 Write job control run streams

0030 ST0162 - Network Administration

1	N288	Analyze communications-computer systems processing capabilities
2	N289	Analyze database requirements
3	N290	Brief functional area personnel on capabilities of proposed communications-computer systems equipment
4	N291	Design remote terminal networks
5	N292	Design terminal configurations
6	N293	Determine communications-computer systems data security requirements
7	N294	Determine communications-computer systems input requirements
8	N295	Determine communications-computer systems interface or integration requirements
9	N296	Determine communications-computer systems output requirements
10	N297	Determine interrelationships among files, documents, or data items
11	N298	Determine methods of accessing data bases
12	N320	Review database specifications

0031 ST0186 - System Integration Planning

1	N318	Prepare recommendations for size and capacity of proposed communications-computer systems equipment
2	N319	Review communications-computer systems interface or integration requirements
3	N324	Review recommendations for proposed communications-computer systems equipment
4	N325	Review technological developments in communications or teleprocessing
5	N326	Review technological developments in processing, storage, or information retrieval

0032 ST0175 - Software System Analysis

1	N307	Gather systems analysis background information by interview
2	N308	Gather systems analysis background information by observation
3	N309	Gather systems analysis background information by review of systems documentation
4	N312	Perform or participate in economical feasibility studies
5	N313	Perform or participate in operational feasibility studies
6	N314	Perform or participate in technical feasibility studies

0033 ST0192 - Project Development

1	N302	Develop inputs to communications-computer systems directives
2	N303	Develop inputs to communications-computer systems program plans
3	N321	Review data systems project directives
4	N322	Review data systems project plans

0034 ST0150 - Test and Evaluation

1	N317	Prepare plans to test software interface
2	O345	Evaluate communications-computer systems change requests
3	O350	Evaluate operating systems change requests
4	O351	Evaluate software baseline change requests

0035   ST0144 - Configuration Management

1	O375	Review configuration management plans
2	O376	Review database audit procedures
3	O377	Review database baseline change requests
4	O383	Review software development guides

0036   ST0148 - System Changes

1	O363	Prepare communications-computer systems change requests
2	O366	Prepare database baseline change requests
3	O368	Prepare operating systems change requests
4	O369	Prepare software baseline change requests

0037   ST0165 - System Integrity Checks

1	P396	Analyze communications-computer system test results
2	P400	Develop inputs to communications-computer systems test plans
3	P410	Prepare communications-computer systems input test data
4	P411	Review communications-computer systems input test data
5	P412	Review communications-computer systems test plans
6	P413	Review communications-computer systems test reports
7	P416	Run integration tests on communications-computer systems
8	P417	Run interface type tests on communications-computer systems
9	P418	Run parallel type tests on communications-computer systems
10	P419	Run regression tests on communications-computer systems
11	P420	Run subsystems tests on communications-computer systems
12	P421	Run total systems tests on communications-computer systems
13	P422	Run validation or verification tests on communications-computer systems

0038   ST0323 - Switchboard Operations

1	M268	Connect calls according to their precedence
2	M269	Coordinate switchboard circuit or equipment problems with maintenance, technical control, or support agencies
3	M277	Monitor high precedence or emergency calls
4	M280	Place calls between subscribers, other than special handling calls
5	M281	Place special handling calls
6	M282	Process telephone conference calls
7	M287	Test switchboard circuits

0039	ST0280 - Phone Directory Administration

1	M266	Compile telephone directories
2	M271	Maintain accounts for telephone customers or toll services
3	M273	Maintain master telephone information files
4	M275	Maintain switchboard instructions for emergencies, such as fire, crash, or attack
5	M276	Maintain telephone directories

0040	Tasks not referenced

1	A10	Establish publication libraries
2	B21	Direct development or maintenance of status boards, graphs, or charts
3	B22	Direct maintenance of administrative files
4	B31	Supervise Apprentice Communications-Computer Systems Operators (AFSC 49131)
5	B32	Supervise civilians
6	B35	Supervise military personnel with AFSCs other than AFSC 491X1
7	C45	Evaluate suggestions
8	C49	Investigate accidents or incidents
9	C50	Perform safety inspections of work areas
10	C51	Write civilian performance ratings or supervisory appraisals
11	D57	Assign resident course instructors
12	D58	Conduct OJT
13	D59	Conduct resident course classroom training
14	E81	Compare tape identifications and tape file-controls for agreement
15	E85	Establish or review input or output (I/O) logs
16	E86	Establish or review programmer, analyst, or customer contact rosters
17	E87	Establish or review transmittal logs
18	E88	Evaluate quality of customer service
19	E92	Initiate personnel recalls
20	E93	Maintain forms libraries
21	E94	Maintain lists of recurring systems errors
22	E95	Maintain publication files
23	E96	Make entries on equipment configuration or utilization logs
24	E97	Make entries on equipment maintenance records
25	E98	Make entries on recovery records
26	E103	Perform character conversions
27	E107	Review communications-computer systems requirement documentation (CSRD)
28	E109	Review customer requests for communications-computer systems services
29	E110	Test performance of off-line cryptographic equipment
30	E111	Update system loader files
31	E112	Verify charges from commercial cable companies
32	F115	Change internal components of microcomputers, such as personal computer (PC) modulator-demodulators (MODEMs)
33	F116	Change systems hardware configurations
34	F124	Initiate remote job entry (RJE) system mode changes
35	F125	Input or retrieve data using remote inquiry units
36	F128	Interrogate memory location or data storage areas via consoles

37	F132	Load data or messages into optical character readers (OCRs) or optical scan units (OSUs)
38	F133	Load messages or data into paper tape readers
39	F138	Monitor data transmission control units
40	F139	Monitor interactive processing
41	F140	Mount or dismount carriage control tapes
42	F142	Mount or dismount paper tapes
43	F144	Participate in communications-computer systems equipment acceptance tests
44	F145	Participate with programmers in testing or debugging programs
45	F153	Prepare carriage control tapes
46	F154	Replace room, area, or equipment air filters
47	F159	Test MODEMs
48	G161	Align files on disks
49	G162	Assemble I/O data
50	G163	Bind computer printouts
51	G164	Burst or decollate printed output products
52	G165	Develop data base usage reports
53	G166	Develop tape or disk management policies
54	G168	Edit I/O data
55	G169	Establish or update communications plans
56	G171	Pick up from or deliver data to communications center, other than for customers
57	G177	Review disk directories
58	H178	Establish or update computer production schedules
59	H179	Initiate telecommunications service requests (TSRs)
60	H180	Maintain accumulation and distribution scan tables
61	H182	Place remote terminals into or out-of-service
62	H184	Post routing indicator changes
63	H185	Splice paper tapes
64	I190	Assign transmission release codes
65	I197	Interpret or verify paper tape visually
66	I198	Maintain message register, receipt, and destruction certificate forms
67	I205	Prepare plaindress messages to include single call or multiple call
68	I207	Process magnetic tape messages
69	I209	Report interlaced messages to Defense Information Systems Agency (DISA)
70	I210	Report stragglers to Automatic Digital Network (AUTODIN) switching center (ASC)
71	I215	Verify channel number sequence through automatic numbering devices
72	J216	Create communications improvement memorandum (CIM) reports
73	J222	Maintain subject indicator tables
74	K240	Prepare magnetic media failure reports
75	K241	Purge magnetic media, other than by degaussing
76	K242	Review tape usage reports
77	K243	Splice magnetic tapes or leaders
78	L247	Develop inputs for mobile communications deployment plans
79	L254	Perform on-site evaluations during mobile operations
80	M262	Assign voice channels to voice activities
81	M263	Authenticate calls
82	M264	Book calls
83	M265	Compile information for switchboard traffic routing diagrams
84	M267	Configure analog voice equipment to digital voice equipment
85	M270	Initiate loopback tests

86	M272	Maintain logs of control numbers used by customers placing precedence calls
87	M274	Maintain status boards on location of commanders
88	M278	Operate voice recorders
89	M279	Perform equipment or circuit routing using patch cable technology
90	M283	Report call progress information
91	M284	Reroute calls due to circuit failures
92	M285	Respond to supervisory lights
93	M286	Supervise minimize condition actions
94	N299	Determine teleprocessing requirements
95	N300	Develop communications-computer systems tape management systems
96	N301	Develop document grid charts
97	N304	Establish systems study objectives
98	N305	Estimate operating time of communications or teleprocessing requirements
99	N306	Evaluate performance histories on existing communications-computer systems
100	N310	Gather systems classification information by interview
101	N311	Identify communications-computer systems audit trail requirements
102	N315	Prepare communications-computer systems narratives
103	N316	Prepare estimates of communications-computer system run times
104	N323	Review programming standards
105	O327	Administer tape or disk management procedures
106	O328	Analyze database management system (DBMS) memory of storage allocations
107	O329	Analyze system dumps
108	O333	Design carriage control tapes
109	O334	Desk check programs
110	O340	Develop inputs to communications-computer systems user manuals
111	O341	Develop inputs to programming standards
112	O342	Develop programming aids, such as quick-reference tables
113	O343	Develop software release procedures
114	O344	Draft or write computer operation manuals
115	O346	Evaluate contract change packages
116	O347	Evaluate database management systems
117	O348	Evaluate existing programs library routines for applications
118	O349	Evaluate inputs to programming standards
119	O353	Generate program dumps
120	O355	Implement communications-computer systems software by patching
121	O359	Modify communications-computer systems applications
122	O360	Notify vendors or users of program patches
123	O361	Participate in final communications-computer systems reviews for user approval
124	O362	Participate in structured walk-throughs of communications-computer systems programs
125	O364	Prepare communications-computer systems software test analysis reports
126	O365	Prepare communications-computer systems test analysis reports, other than software test analysis reports
127	O367	Prepare design problem reports
128	O370	Prepare software release packages
129	O371	Report implementation status of new communications-computer systems to using agencies
130	O373	Review communications-computer systems audit trails
131	O374	Review computer operation manuals
132	O381	Review data item descriptions (DIDs)
133	O382	Review design problem reports

134	O386	Review software version content requests
135	O387	Review source code listings
136	O388	Select modes of transmission
137	O390	Train computer operators in communications-computer systems
138	O391	Train users in communications-computer systems
139	O392	Verify problem statements expressed in difficulty or trouble reports
140	O393	Write database run streams utilizing database routines, such as query language processors (QLPs)
141	O395	Write job parameter statements
142	P401	Draft or write configuration management plans
143	P403	Evaluate communications-computer systems test plans
144	P404	Evaluate performance histories on specific communications-computer systems production runs or jobs
145	P406	Maintain change control form logs or configuration status accounting logs
146	P407	Participate in configuration control boards (CCBs)
147	P408	Participate in software acceptance tests on communications-computer systems
148	P414	Review requests for deviation from or waiver of configuration identification requirements
149	P415	Review requests for deviations or waivers from standards or specifications
150	P423	Select modes of data transmission
151	P424	Test computer programs
152	P425	Track status of software discrepancies
153	P426	Translate communications into machine usable format
154	P427	Validate program run times
155	Q428	Assign control numbers to classified documents
156	Q429	Assign user identifications (IDs) or passwords
157	Q438	Establish or update listings for classified jobs
158	Q451	Prepare accreditation's or certifications for risk analysis documentation
159	Q454	Prepare locator sheets on classified materials
160	Q455	Prepare or maintain lists of personnel authorized to use on-line devices
161	Q456	Prepare or revise classified materials control logs
162	Q460	Prepare or update risk analysis documentation
163	R474	Complete credit or damage claims
164	R475	Compute communications-computer systems equipment lease charges
165	R492	Prepare AF Forms 597 (ADPE Maintenance Record) or vendor invoice certificates
166	R493	Prepare or process output media for salvage or recycling
167	R498	Review credit or damage claims